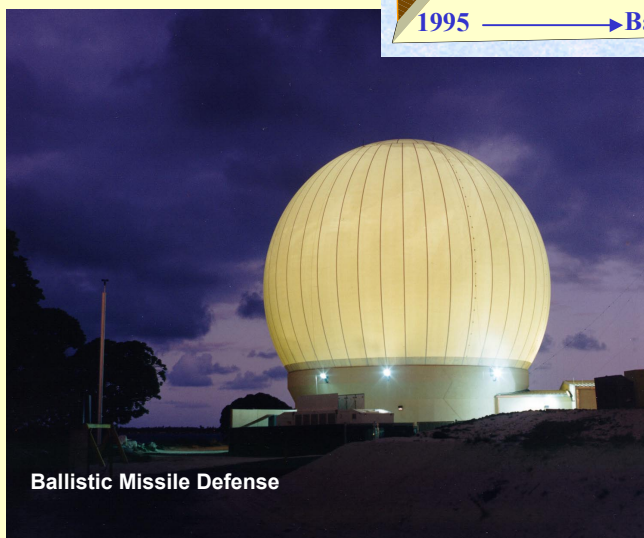
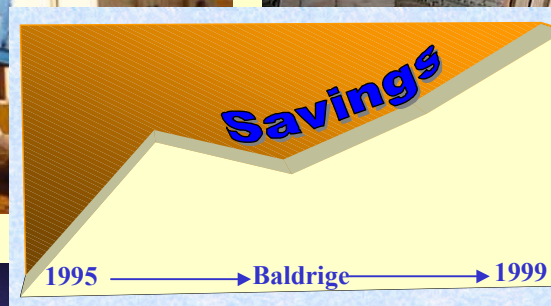


# U.S. Army Engineering and Support Center Huntsville

U.S. Army Corps  
of Engineers



**President's Quality Award 2001**

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## PRESIDENT'S QUALITY AWARD NOMINATION FORM

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### Applicant Organization

*Name:* U.S. Army Engineering and Support Center, Huntsville  
*Address:* 4820 University Square  
Huntsville, Alabama 35816-1822

### Highest Ranking Official in Applicant Organization

*Signature:* \_\_\_\_\_

*Name:* Colonel Harry Spear  
*Title:* Commander  
*Address:* U.S. Army Engineering and Support Center, Huntsville  
ATTN: CEHNC-DE  
4820 University Square  
Huntsville, Alabama 35816-1822  
*Telephone:* 256-895-1300  
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### Size of Organization

*Number of Employees* (list federal employees, civilian, military, and contract support employees separately): Approximately 600 civilian and 5 military employees

*Number of Sites:* 6

*Budget for Preceding Year* (circle one):

0-\$1M

\$10M-\$100M internal  
operating budget

\$500M-\$1B total program  
budget

\$1M-10M

\$100M-\$500M

Over \$1B

*List Sites:* Huntsville, Alabama; Anniston, Alabama; Pine Bluff, Arkansas;  
Hermiston, Oregon; Rock Island, Illinois; Aberdeen Proving Ground,  
Maryland

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**PRESIDENT'S QUALITY AWARD NOMINATION FORM—Continued**

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## ***Organization Overview***

## 1. Mission

Located in north Alabama, the U.S. Army Engineering and Support Center, Huntsville (HNC) is a major subordinate command (MSC) serving under Headquarters, U.S. Army Corps of Engineers (HQUSACE). The Corps structure also includes 8 divisions, 40 geographic districts, 4 labs, 5 field operating activities, and 1 other program center. Although most Corps organizations' missions are tied to geographic boundaries, our mission is defined programmatically and functionally; that is, we do work that can be done more efficiently at the national level rather than at the regional level or that the Corps' traditional structure cannot accomplish efficiently.

| Huntsville Center's chartered mission |   |
|---------------------------------------|---|
| 1.                                    | National programs   |
| 2.                                    | Programs that are broad in scope or technically complex   |
| 3.                                    | Programs requiring integrated facilities or systems crossing geographical division boundaries                                   |
| 4.                                    | Programs requiring commonality, standardization, multiple site adaptations, or technology transfer                              |
| 5.                                    | Programs requiring a centralized management structure for effective control of program development, coordination, and execution |
| 6.                                    | Programs requiring services not normally provided by other Corps organizations  |

## 2. Organizational Structure

Our structure is aligned to reinforce customer focus. As shown in our organizational chart on page v, directorates serving our external customers report to our civilian deputy, and directorates and offices serving our internal customers report to our military deputy. Within this structure, our primary work unit is the integrated process team (IPT). IPT's are cross-functional teams that bring together the required mix of resources and skills needed to deliver a specific product or service. The circles in the chart represent the IPT's executing our key processes, which are shown in the arrows. By reducing hierarchical barriers through teaming, our employees are less hindered by bureaucratic boundaries. We attribute our low operating costs, in part, to our flatter team structure.

## 3. Funding and Operating Climate

Unlike most Corps of Engineers organizations, our work is not predetermined by geography. We are, therefore, 100-percent cost reimbursable; that is, we do not receive congressional appropriations as do most other Corps and Federal organizations. Our basic funding source is a customer base that

is free to look elsewhere for products and services. As a result, we operate much like a business, with customers who expect competitive costs. Each dollar that we spend is a customer dollar that must be accounted for. Every hour of work is tracked through our Corps of Engineers Financial Management System (CEFMS) so that customers know exactly how their money is spent.

## 4. Major Markets

Figure 1 shows our major markets. Table 1 shows a breakdown of our product lines, products, customers, suppliers, and partners. Market trends in fig. 7.2-17 demonstrate our ability to respond to changing market needs. Demilitarization includes the Department of Defense's largest and most complex construction project, chemical demilitarization (chem demil) plants.

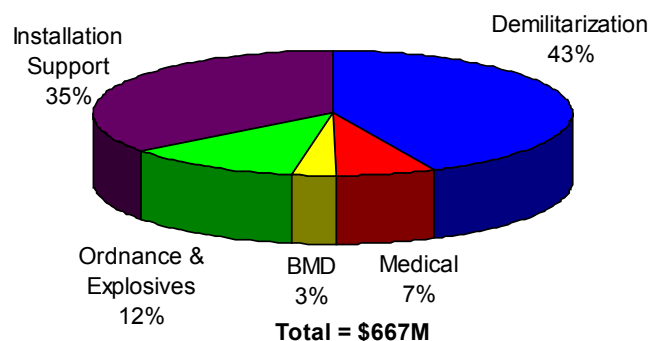


Figure 1. Markets by FY99 product line funds.

## 5. Employee Profile

We have 5 Army officers and about 636 civilian employees. Average employee age is 46.5 years, with 285 employees holding bachelor's degrees and 70 with advanced degrees. Our work force composition is 40.9% female, 59.1% male, 85.2% Caucasian, 14.8% minorities (11.4% African-American, 0.6% American Indian, 1.5% Hispanic, and 1.3% Asian Pacific). By employee vote, we do not have union representation.

## 6. Key Processes

Our products and services are produced through our four key processes listed below. Integration of those processes are shown by the arrows circling the product lines in our organizational chart, page v:

- Engineering and technical services
- Construction management
- Program and project management
- Contracting

Through those key processes, we serve as the design and construction manager for Chem Demil plants and as the Corps of Engineers center of expertise for the Range and Training Land



Table 1. Huntsville Center markets by product line, with key customers, suppliers, and similar providers

| Product Line  | Product/Service   | Primary Customers  | Major Suppliers/Partners  | Competitors/Similar Providers   |
|---|---|--|---|---|
| Demilitarization: <ul style="list-style-type: none"> <li>Chemical Stockpile Disposal</li> <li>Nonstockpile Disposal</li> <li>Russian Demil</li> <li>Large Rocket Motor Demil</li> </ul>   | Design/construction of demilitarization plants for chemical munitions and rocket motors; nonstockpile cleanup; Russian Demil support  | PMCD, HQUSACE, SARDA, IOC, OSD   | Corps districts, Quality Research; Westinghouse; Bechtel; Raytheon; Ralph M. Parsons; Teledyne Brown; PM Nonstockpile, Technical Escort Unit  | Tennessee Valley Authority, foreign governments                           |
| Medical: <ul style="list-style-type: none"> <li>Medical Program</li> <li>Medical CX</li> <li>OMEE</li> </ul>  | O&M repair/renewal, equipment acquisition   | MEDCOM, Air Force, VA  | Corps districts, Kirlin, Earth Tech, Siebe, Syska & Hennessy, PC2/Sys.Corp.; Health Facilities Planning Agency, MEDCOM Tech Team  | CESAM, CESWF, NAVFAC, VA  |
| Ballistic Missile Defense: <ul style="list-style-type: none"> <li>National Missile Defense</li> <li>Theater Missile Defense</li> </ul>  | Management of BMD facility design and construction  | BMDO, SMDC, Boeing, NMD  | Black & Veatch, POD, CRREL, NMO   | SMDC, Air Force, NAVFAC   |
| Ordnance & Explosives (OE)  | OE clearance on Federal sites; policy implementation guidance, safety oversight, and applied technology development   | Departments of Army, Air Force, & Navy; Under Secretary of Defense for Environmental Security, HQUSACE, Corps Districts, Forts McClellan, Drum, and Irwin.   | Corps districts; EHSI, Zapata; Earth Tech; Environmental Science & Engir.; Montgomery Watson; Foster Wheeler; Ralph M. Parsons; Human Factors Applications; CMS; American Technologies Inc.; UXB, Inc.  | AEC, USATCES, Navy, EOD Technology Center, military services              |
| Installation Support: <ul style="list-style-type: none"> <li>Design Services</li> <li>Energy Program</li> <li>Criteria Documents</li> <li>Range Program</li> <li>UPH</li> <li>Electronic Technologies</li> <li>Automated Systems</li> <li>Environmental</li> <li>Advanced Technology</li> <li>Legacy</li> <li>OMEE</li> <li>AFCS</li> <li>Operational Forces Support</li> </ul> | Engineering, contracting, legal, mgt. services for energy systems, including ESPC's; O&M remediation contracting; utilities privatization; central mgt services; range design, dev & mgt of software, utilities efficiency; guide specs; support to deployed forces for any of the services, as needed. | FORSCOM; DOE; DMA; CPW; USAR; Marines; DSC; DLA; AMCOM; DRMS; DFSC; INSCOM; OSD; IOC; Army; Air Force; DAMO; HQUSACE; TRADOC; DFSC; MEDCOM; SMDC, DLA, AMC, HQDA, JCS, Nat'l Guard, Coast Guard, Navy, USAEUR, SOUTHCOM, CENTCOM, ACSIM, HQUSACE, ARNG, USMC | Corps districts/labs; HEC; Northeast Energy Services; Honeywell; Duke Engineering; Equitable Resources; CoEnergy; CES Way; Systems Corp.; SEIBE; Vanguard; CEMP-ET, CEMP-EA, Syska and Hennesey; J&J Mgt, Inc; Parsons; Physitron, Inc; TBE; ARL; SNL; PL; NSWC; Crane; Dyntel; CRST planning team, Combat Training Support, Nat'l Planning Group; TRADOC | DOE, Air Force, DOD Labs, Corps districts, NAVFAC, Military Services, DLA |

Program (RTLP), Utility Monitoring and Control Systems (UMCS), Ordnance and Explosives (OE), Intrusion Detection Systems (IDS), Operation and Maintenance Engineering Enhancements (OMEE), Energy Savings Performance Contracts (ESPC), Tri-Services Automated Cost Engineering System (TRACES), and Programming, Administration and Execution (PAX) Systems.

## 7. Major Equipment, Technologies, & Facilities

*a. Equipment and Technologies.* Because of the technical nature of our work, computers and other electronic equipment are our major equipment investment, enabling us to use, enhance, and develop automation technologies.

- Computer-aided Drafting and Design (CADD), Global Positioning System (GPS), Geographical

Information Systems (GIS), internet/intranet, and electronic contract management are integrated into our products and services.

- For our work in OE cleanup, we use and develop specialized equipment and technologies, such as remote video inspection, model-based ordnance characterization, neural networks, geophysical mapping, and synthetic aperture radar.
- Our RTLP has developed a specialized software program to analyze line-of-sight, target visibility, and target applicability for qualification training, which is used on all armor ranges.
- We design, upgrade, and manage automated systems for other military services, such as TRACES and PAX.
- We design Chem Demil plants, including their automated and robotics systems. We also buy the technical equipment for those plants.

*b. Facilities.* Our main office facility in Huntsville houses most of our employees. We have resident offices in Anniston, AL; Hermiston, OR; Pine Bluff, AR; Aberdeen, MD; and Newport, IN. We have onsite liaison offices for the Program Manager for Chemical Demilitarization (PMCD) at Aberdeen Proving Ground, Edgewood, MD, and for Production Base Support (PBS), Rock Island, IL. We also maintain a Chem Demil project office in Moscow, Russia. Finally, elements of the Medical Center of Expertise and Installation Support directorates are located near Washington, DC.

### 8. Key Requirements

Our five key requirements are quality, cost, schedule, customer satisfaction, and safety. Business action plan development and execution and our team performance measures are aligned through those key requirements.

### 9. Supplier and Partnership Relationships

Our suppliers are architect-engineer (A-E) firms, construction contractors, equipment manufacturers, and service contractors. Our primary service suppliers provide our automated systems support. Our suppliers are managed through our contracts and evaluated through our evaluation systems.

To help ensure that we develop and maintain effective, long-term supplier relationships, our strategy includes using multiple-year, multiple-award contracts. Of our 16 A-E delivery order contracts, 12 are five-year contracts, 2 are three-year contracts, 2 are four-year contracts, and 5 are two-year contracts.

We maintain partnerships with Corps organizations in various areas. Table 2 shows the work we have sent to our Corps partners in millions of dollars.

Table 2. Work sent to Corps partners

| FY95    | FY96    | FY97    | FY98  | FY99    |
|---------|---------|---------|-------|---------|
| \$46.7M | \$51.3M | \$50.2M | \$48M | \$39.6M |

### 10. Changes in Direction

*a. Quality Alignment.* In late FY95, we adopted the Baldrige criteria as the self-assessment tool for improving business processes. Through Baldrige, Huntsville Center transformed itself from one of the Corps' most expensive elements to its most efficient. Even more, comparisons to private industry show that we are more efficient than A-E firms doing similar work. Table 3 below shows a before-and-after corporate-level comparison of our cost efficiency, which translates into over \$80M in savings in in-house costs alone.

Table 3. Improvement through Baldrige

| Indicator                        | FY92-95 | B<br>A<br>L<br>D<br>R<br>I<br>G<br>E | FY96-99 | Change | FY 99 Only | Change |
|----------------------------------|---------|--------------------------------------|---------|--------|------------|--------|
| In-house % of total expenditures | 11.3%   |                                      | 7.7%    | 32%    | 6.4%       | 43%    |
| G&A                              | 42%     |                                      | 28%     | 33%    | 24%        | 43%    |
| Engineering TLM                  | 2.8     |                                      | 2.40    | 14%    | 2.42%      | 14%    |
| Workload/FTE (current dollars)   | \$735K  |                                      | \$1064M | 45%    | \$1356M    | 84%    |
| TOTAL SAVNGS = \$80.3 Million    |         |                                      |         |        |            |        |

Our customers have noticed. Since 1995, customer satisfaction ratings have risen, making us leaders in the Corps of Engineers (fig. 2). Question 7 is cost and question 6 is quality, indicating that we have improved costs while improving satisfaction with quality.

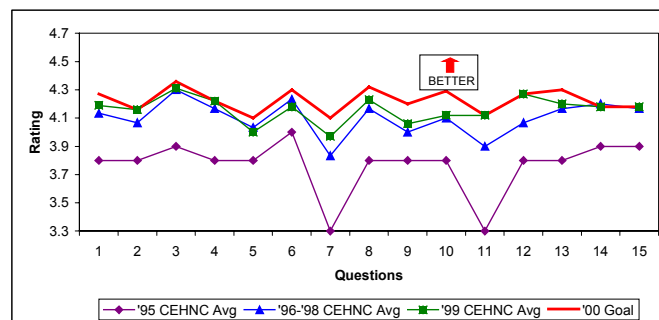


Figure 2. Customer Survey Trend (scale of 1 to 5)

Furthermore, at a time of military budget cut-backs, our overall program increased 94%. Even



private industry partners have responded. Boeing Corporation, the lead systems integrator for National Missile Defense (NMD), included us in its bid proposal. As a result, we are the NMD manager for facilities design and construction.

How did we do it? We executed our quality initiatives through four guiding principles as follows:

- Reduce boundaries:
  - ✓ Flatten the organization.
  - ✓ Implement and refine teaming.
  - ✓ Develop team performance awards.
  - ✓ Conduct peer reviews.
  - ✓ Implement and refine partnering.
- Focus on cost effectiveness:
  - ✓ Educate the work force.
  - ✓ Hold monthly business meetings.
  - ✓ Provide visibility/feedback.
  - ✓ Develop a realistic budget.
  - ✓ Ensure management involvement.
- Adapt to changing environment:
  - ✓ Develop a strategic plan for where we're headed.
  - ✓ Develop business plans for products lines and track through performance indicators.
  - ✓ Implement and refine teaming.
- Play by the rules:
  - ✓ Train all fiscal managers in appropriations law.
  - ✓ Continually evaluate and refine processes to ensure regulatory compliance.
  - ✓ Emphasize acquisition plans and strengthen contractor surveillance.
  - ✓ Document personnel selection process.
  - ✓ Establish systematic internal reviews to ensure legal and regulatory compliance.

*b. Changes in responsibility.* Our level of responsibility has grown from support of program elements to cradle-to-grave management of programs, such as Chem Demil plant design and construction. Through the initiatives under our guiding principles, above, we are able to take on more responsibility (fig. 3) with less staff (fig. 4).

## 11. Competitive Factors

*a. Relative position in the industry.* If we were a private design firm, we would be the eleventh largest of the top 500 design firms (ENR, 10 April 2000). Our share of Corps work as measured in FY99 military program dollars is about 8.0%.

*b. Limits on competing.* Because we are a government agency, laws, regulations, and manpower

ceilings govern the extent to which we may perform certain work. For example, without specific authority, we are not permitted to compete with private industry for work. In addition, our headquarters regulates new work distribution throughout the Corps of Engineers. Within those narrow limits, we study the military market for areas that could benefit from our services. As a result, we developed and market the product lines listed in table 1. Our corporate long-term strategic goal is a steady state with modest growth through productivity (table 2.2-1).

*c. Comparison to similar providers.* By fully participating in internal management review, such as the USACE Command Management Review (CMR), which reviews the business practices and products of all Corps offices, we are better able to improve and verify our own effectiveness and efficiency. Through the CMR, we compare ourselves to Corps districts—especially those with large military programs.

Another indicator of our competitiveness is our increasing workload. In December 1998, we were appointed by the Chief of Engineers and the Program Manager, NMD to be the program manager for facilities design and construction. Government

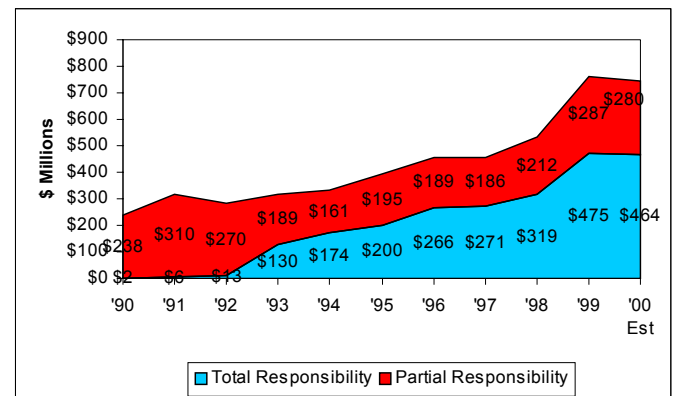


Figure 3. Growth in program responsibility

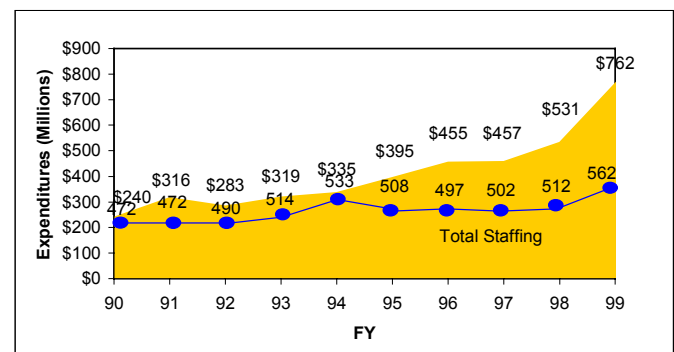


Figure 4. Staffing trends versus workload

work transferred to us per customer request is Russian Demil facilities construction. In November 1998, we were designated by the Chief of Engineers to be the Installation Support Center of Expertise. In April 1999, we were designated to receive the operational mission responsibility of the Medical Facilities Office in Washington, DC.

*d. Competitive success factors.* Like a business, we depend on customers to fund products and services. Therefore, because our customers have consistently told us that our costs were a principal concern for them, we have focused our measures heavily toward costs. As we improved cost satisfaction, we have also improved customer satisfaction with the quality.

*e. Changes affecting competition.* One change affecting competition is increasing emphasis on privatization; therefore, government organizations must become as efficient as private industry in

order to retain work. Another factor is the Government Performance and Results Act of 1993, which mandates that program funding be based on efficiency measures by 2000. Because of those factors, we closely manage our costs.

## 12. Other factors

*Regulatory Environment.* Two of our product lines, OE and Chem Demil, operate in an environmental climate that includes Federal and state laws and regulations governing the removal, handling, storage, and transportation of conventional and chemical munitions. Those laws and regulations often conflict, thereby affecting the progress of our projects. To mitigate such effects, we advise those developing regulations. To ensure that laws and regulations are followed, we help develop local and national policies for program execution.

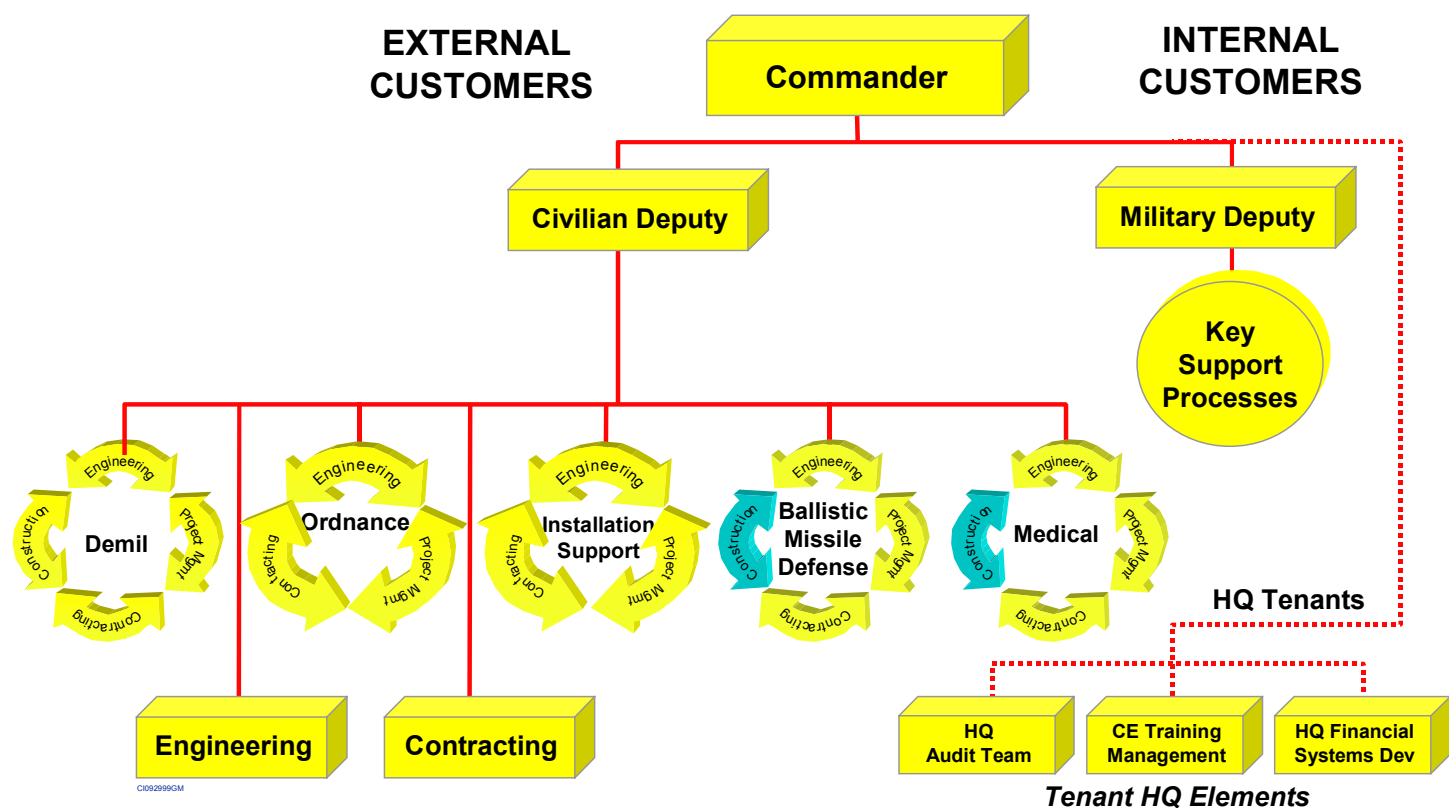


Figure 5. Huntsville Center is organized along a customer-focused team structure. The circles represent our integrated process teams (IPT's) executing our four key processes, (1) engineering and technical services, (2) construction management, (3) program and project management, and (4) contract management. Through dedicated or matrixed teams, we are able to re-form our organization and integrate any processes needed to provide products and services to specific customer needs.



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## ***1.0 Leadership***

**1.1 Organizational Leadership.** Our executive officers are the Commander, the Deputy for Programs and Technical Management (Civilian Deputy), and the Military Deputy Commander. Reporting directly to them are our directorate and separate office chiefs. The executive officers, directors, chief of Counsel, and Quality Coordinator form our Quality Steering Group (QSG), which is Huntsville Center's main governing body.

### 1.1a Senior Leadership Direction

#### 1.1a(1) Setting, communicating, deploying direction

Fig. 1.1-1 shows the integration and execution of our leadership system. Leaders set direction during strategic planning (box ② in fig. 1.1-1), where they review and modify our values and guiding principles (fig. 1.1-2) and set direction for the Center (2.0).

Leaders use the following mechanisms to reinforce values and guiding principles, tie performance to planning, and maintain strong customer focus. These items coordinate with box ⑦ in fig. 1.1-1:

- **360 Performance Review.** Leaders use 360 to evaluate employee and management performance and to reinforce values. 360 criteria include items on teamwork, ethics, customer service, innovation, communication, and efficiency (5.1a(3)).

- **Team structure.** Our team structure, described in 5.1a(1), is the bedrock of our customer-focused culture and process improvement.

- **Team Awards System.** Our team awards system aligns organizational performance to strategic and business plan goals, promotes teamwork, and reduces boundaries (5.1a(4)).

- **Customer surveys.** Surveys reinforce our customer-focused culture. We use our Center-wide external customer survey (table 7.1-1) to determine external customer satisfaction and improve performance. We use our internal customer surveys to evaluate and improve in-house support.

- **Open door policy.** The commander's door is open to all employees who need to talk or just want to grab a handful of chocolates from the bottomless bowl on his conference table.

- **"It's Our Business"** fact sheets inform employees about improving business practices.

- **Command Bulletin.** Our award-winning monthly employee newsletter includes a monthly message from the Commander.

- **Standdowns.** Derived from standard safety procedures, a standdown is a mandatory work stoppage providing focused program review.

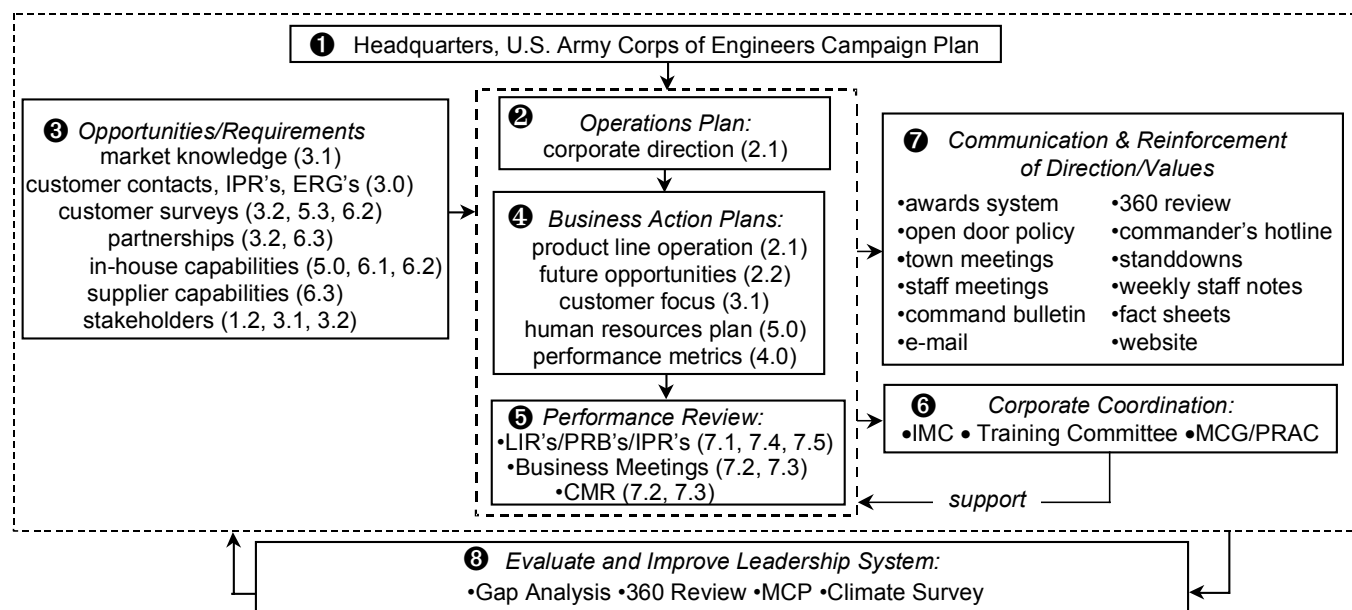


Figure 1.1-1. Huntsville's Center's Leadership System. Based on the ① Headquarters, U.S. Army Corps of Engineers (HQUSACE) goals for the Corps of Engineers and ③ other requirements and opportunities, leaders develop our ② strategic plan, i.e., our corporate operations plan, as summarized in table 2.2-1. To align with that plan, teams prepare annual ④ business plans, which are ⑤ reviewed by leaders in the appropriate forum (table 1.1-1). The ⑥ Information Management Committee (IMC), Training Committee, Management Coordination Group (MCG), and Program Resource Advisory Council (PRAC) provide analysis and support for plan development and execution as described in 1.1b(2). Leaders ⑦ communicate direction and values through various methods, especially team awards and 360. Finally, the system is ⑧ evaluated and improved.

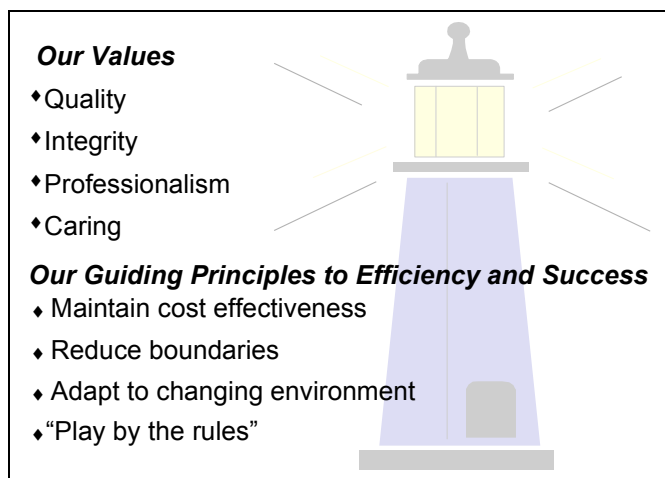


Figure 1.1-2. HNC values and guiding principles

- *Town Meetings*. The commander uses Town Meetings to communicate with the work force.
- *E-mail and Intranet* are used to disseminate calendar of events, staff notes, monthly Business Meeting minutes, etc.
- *Employee Orientations* are held for new Center employees and include the commander's briefing, briefings on our team process, quality management process, ethics, EEO, safety, etc.

#### **1.1a(2) Promoting learning, innovation, empowerment**

Leaders use the following mechanisms to create a work environment that supports innovation, continuous learning, and empowerment:

- *Continuous learning* is implemented primarily through our Individual Development Plan (IDP) process, Training Plan process, and training delivery options described in 5.2.
- *Training Committee*. Reporting to senior leaders, our Training Committee oversees training needs and budget and promotes continuous learning (5.2).
- *360 peer review*. Our 360 criteria specifically evaluates employees on innovation. Managers use 360 trends to target training needs. Improvement plans include skill/knowledge building activities.
- *Team structure*. Our team structure reduces boundaries, thereby enabling decision making at the lowest level possible. Our teams are the basic source of process improvement, which are reported quarterly in PRB's (6.1).
- Our *Administrative Support Group* is an innovative approach for building skills of administrative support employees as described in 5.2a(7).
- *On-the-job training and temporary details* as described in 5.2 not only expand learning but also give employees the opportunity to assume more responsibility and develop professionally.

**1.1a(3) Seeking opportunities** Our leaders seek future opportunities through the following mechanisms.

- *Huntsville's Charter*. Any new opportunities must fall within our chartered mission and be approved by HQUSACE Board of Directors.
- *Market Knowledge*. As explained in 3.1, leaders look for opportunities through DOD budget trends, conferences, etc.
- *Requests/Referrals*. Most of our new opportunities are gained through referrals, a fact that promotes strong customer orientation.
- *Customer Survey*. Through our annual external customer satisfaction survey, we ask current customers if they know of others that could use our services (table 7.1-1, #19 and #20).
- *Strategic Partnerships*. Long-term customers are a continual source of new work. Through such partnerships, we were selected as the manager for facilities design and construction for National Missile Defense, the Corps Installation Support Center of Expertise, and the Corps Medical Center of Expertise.

#### **1.1b Organizational Performance Review**

##### **1.1b(1) Reviewing organizational performance**

Leaders review organizational performance through the metrics in our five key requirements summarized in table 4.1-1. Reviews are described below and summarized in table 1.1-1. Items coordinate with box ⑤ in fig. 1.1-1.

- *Command Management Review (CMR)*. A quarterly review of major subordinate commands (MSC's) by the Chief of Engineers, HQUSACE.
- *Monthly Business Meeting*. A monthly review by senior leaders of our cost-of-doing business.
- *Division, Branch, and Team Meetings*. Reviews by leaders and teams to track process performance.
- *Project Review Board (PRB)*. Senior leader review of business action plans developed during strategic planning. Includes review of supplier and in-house performance, information technology, training and other human resource needs, customer satisfaction, process improvement actions, best practices, lessons learned, and savings.
- *Line Item Reviews (LIR's)*. Project-level review of business action plans developed during strategic planning. Companion to PRB's, LIR findings are reviewed by exception at PRB's.
- *In-Progress Reviews (IPR's)*. Program-specific reviews with partners and stakeholders.



**1.1b(2) Translating findings into improvement priorities**

During the reviews in table 1.1-1, we use the following criteria to set priorities for action.

- *Priority One: Safety.* Because of the dangerous nature of our programs, safety issues take precedence over other actions. Our world class safety record is due to Corps of Engineers safety procedures, which set the industry standard for safety. Our performance exceeds Corps goals.
- *Priority Two: Legal, Ethical, and Regulatory Compliance.* One of our guiding principles is “Play By the Rules.” At Huntsville Center, customers get the highest legal, ethical, and regulatory standards.
- *Priority Three: Customer Requirements.* Because we are a 100% reimbursable organization, we maintain a high level of customer focus. Our key customer requirements are safety, satisfaction, cost, quality, and schedule. Priorities vary with specific customer requirements and wants.
- *Priority Four: Internal Requirements.* These include system, process, and human resource findings not addressed within the previous priorities.

Based on those priorities, further analyses and actions are carried out as follows:

- *Safety issues* are analyzed and resolved by the appropriate IPT in conjunction with our Safety Office (SO).
- *Legal, ethical, and regulatory* issues are analyzed and resolved by the appropriate team in conjunction with the Office of Counsel (OC), Audit Office (AO), and the Equal Employment Opportunity (EEO) Office.
- *Schedule, budget, and external customer satisfaction* issues are analyzed and resolved by the product or service team.
- *Quality* issues are analyzed and resolved by the process owners and teams with the support of the following resources (box 6 in fig. 1.1-1):
  - > *Management Coordination Group (MCG)* meets weekly to ensure resource adequacy and alignment and define new service areas.

> *Training Committee* members coordinate and evaluate training requirements and budgets.

> *Program Resource Advisory Council (PRAC)* tracks and allocates funds and manpower; resolves budget issues; reviews and approves program and internal operating budgets.

> *Information Management Committee (IMC)* meets bimonthly to address Center information technology issues, resources, and services.

**1.1b(3) Key performance review findings**

Table 1.1-2 shows a sample of key review findings. CMR, PRB/LIR, and Business Meeting information is communicated through staff and team meetings and posted on the internet and intranet. Depending on urgency and scope, information is communicated through e-mail, command bulletins, fact sheets, newsletters, and town meetings. For example, when continuously changing technology is a factor, we use program-specific newsletters. Although communications vary depending on requirements (table 3.1-4 and fig. 3.1-1), our basic approach for communicating with customers are personal contact with the project manager. For suppliers, the internet has been particularly successful for Commerce Business Daily (CBD) notices and electronic solicitations.

**1.1b(4) Improving leadership** Our major systems for improving leadership are described in the following bullets and shown in box 8 of fig. 1.1-1. Table 1.1-3 shows a summary of key improvements to our leadership system.

- *360 Performance Review.* Through 360, leaders are rated by subordinates, external customers, and peers. Leaders also develop improvement plans on their three lowest-rated areas (5.1a(3)).

- *Management Control Process (MCP).* Leaders evaluate our critical controls to determine weaknesses in management systems.

- *Climate Survey.* The QSG develops performance improvement plans for the three lowest-rated areas of our climate survey (5.3c).

Table 1.1-1 shows performance reviews and process control points where we develop actions like the examples in table 1.1-2. (Green indicates program/product aggregate reviews, blue business aggregate, red HQ aggregate.)

| Review Forum                      | Focus   | Reviewers   | Section       | Frequency              |
|-----------------------------------|---------|---|---------------|------------------------|
| Command Management Review (CMR)   | All     | Chief of Engineers/Major Subordinate Commands (MSC's) | 7.2, 7.3      | Quarterly              |
| Business Meeting                  | Process | QSG   | 7.2, 7.3      | Monthly                |
| Division, Branch, & Team Meetings | Process | Directors, Division Chiefs, Team members              | 7.2, 7.3, 7.5 | Monthly, weekly, daily |
| Project Review Board (PRB)        | Program | QSG   | 7.1, 7.4, 7.5 | Quarterly              |
| Line Item Review (LIR)            | Product | Teams   | 7.1, 7.4, 7.5 | Monthly                |
| In-Progress Reviews (IPR's)       | Product | Teams, Customer, Suppliers, Stakeholders              | 7.1, 7.4, 7.5 | Varies with req'mts    |



Table 1.1-2. Sample of key performance review findings

| Analysis Findings  | Impact On Business   | Action  | Results   |
|--|--|---|---|
| Customers think we are too expensive.  | Potential to lose work to other Corps elements.                                | Develop business process. Adopt Baldrige criteria as business framework.  | Productivity rose. Costs decreased. Customer satisfaction rates rose. Assigned Installation Support and Medical Centers of Expertise. |
| Contractor estimate lower than our government estimate for Chem Demil Aberdeen plant.  | Potential for budget and schedule shortfalls. Loss of stakeholder credibility. | Supported our estimate; MILCON kept funds in program.   | Contractor found that their estimate was too low; we did not have to ask for funding because of our efforts.                          |
| High false alarm rates for ordnance detection at Jefferson Proving Ground III testing. | Uncovering scrap instead of ordnance drives up removal costs.                  | Develop fingerprints for specific munitions using geophysical mapping and a geographical interface system database. | Lowest false alarm rate when tested at JPG IV. Apply lessons to next generation of ordnance clearance contracts.                      |
| One-third of ordnance investigation costs goes for vegetation clearance.               | High investigation costs drain removal funding.                                | Combine new technologies and statistical analysis to investigate wooded sites.                                      | New method was employed at first ordnance site saving \$30K.  |

Table 1.1-3. Summary of Improvements in Leadership

| Evaluation   | Improvement  | Result   |
|--|--|--|
| Review process not systematic and not strongly linked to strategic goals. Decision-making sometimes micro-managed. Communication between teams weak.                       | Standardized LIR/PRB format and process based on strategic and business plan.            | Reviews now track program progress toward corporate strategic goals. Review at PRB level is by exception with teams empowered to resolve problems at the LIR level if possible. All IPT activities are tracked for progress and best practices. Lessons learned are shared within and between IPT's. (table 1.1-1) |
| Losing certain aspects of customer focus through stovepipe structure, especially on large programs. Stovepipe structure hampers responsiveness to changing business needs. | Aligned organization along internal and external customers. Developed teaming structure. | IPT's for each program integrate processes across stovepipes to meet specific product requirements. Productivity and responsiveness increased, since resources are easily matrixed to other IPT's as requirements change. (5.1a(1) and table 5.1-1)  |
| No systematic approach for building teamwork.  | Developed team performance awards.   | All annual performance awards are team awards that align with strategic and business plans since team award goals are based on plan goals.(5.1a(4))  |
| No systematic, objective approach for reinforcing values.  | Developed 360 peer review system.  | All employees and leaders are evaluated on standard criteria designed to promote behaviors based on values that reinforce strategic goals. Provides a system for broad-based evaluation of personal leadership. 360 improvement plans shape behavior based on values. (5.1a(3))                                    |

• **Annual gap analysis.** We use the Baldrige criteria as a basis for evaluating and improving our leadership system and aligning all of our systems. As shown in fig. 1.1-3, we conduct a gap analysis through our own internal self-assessment and outside feedback. Then, we prioritize areas for improvement. Progress toward gap closure is determined during the next gap analysis cycle when again reviewed.

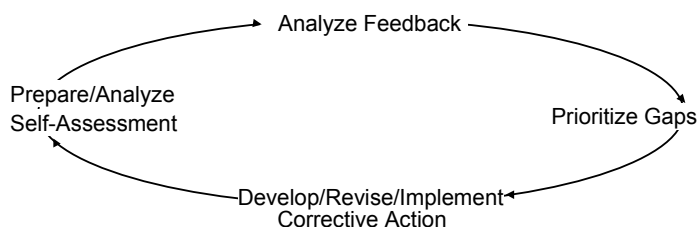


Figure 1.1-3. Annual gap analysis process for continuous evaluation and improvement of systems

## 1.2 Public Responsibility and Citizenship

**1.2a Responsibilities to the public** We treat the public as a partner when addressing areas that hold the potential for danger to life, property, and the environment. The two predominant missions within our area of stewardship are ordnance removal and chemical demilitarization. Under those two major programs, we are responsible for reducing public risk caused by unexploded ordnance and for the design and construction of safe chemical demilitarization facilities. Environmental cleanup for other smaller programs follow the same public responsibility procedures.

**1.2a(1) Addressing impact on society** Fig. 1.2-1 shows our process and measures for determining the societal impact and risks of our work. We execute our societal responsibilities through our public responsibility SOP and our public involvement plans (PIP's), which ensure that we meet or

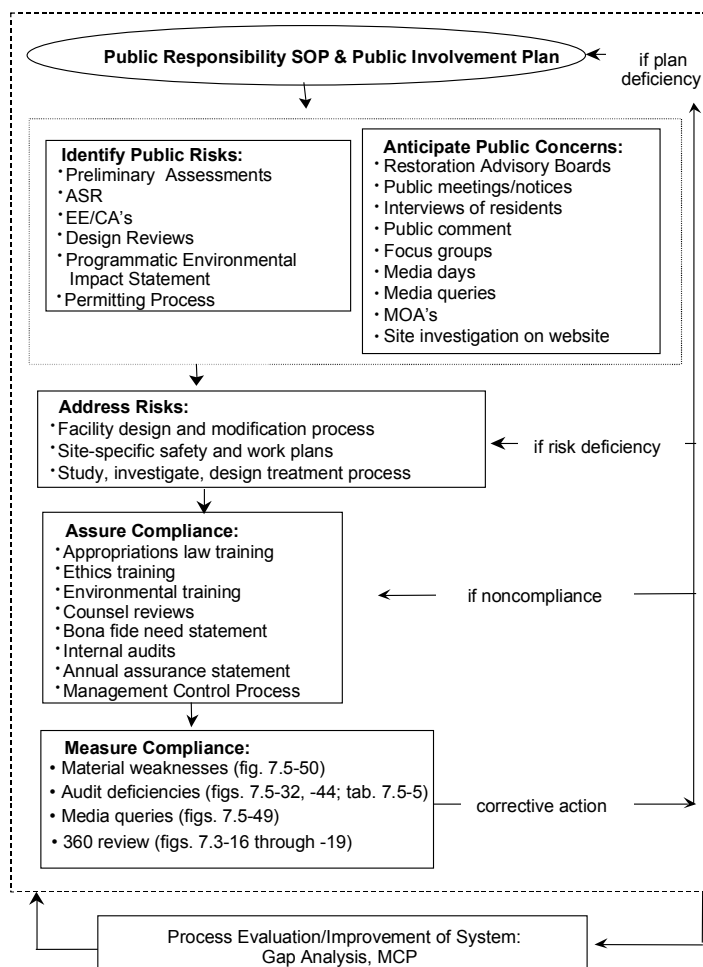


Figure 1.2-1. Through the requirements outlined in our public responsibility SOP and PIP's, we reduce risk to the public and include stakeholders.

exceed legal and regulatory guidelines and requirements or accommodate any site-specific agreements between the Army and the Environmental Protection Agency or State regulatory agencies. Furthermore, leaders reinforce focus on societal responsibility through our guiding principle “Play By the Rules.” To manage risk and to ensure legal and ethical practices within all of our programs and contract actions, we use the following proactive approaches:

- Our 360 performance evaluation includes rating items on ethical behavior. Supervisors counsel employees with low ratings and work with employees to develop improvement plans (5.1a(3), figs. 7.3-16 through -19).
- Our Office of Counsel reviews all contract actions over \$500K.

- All procurement officials must attend annual ethics training.
- All employees with funds authority must attend annual appropriations law training.
- A bona fide need statement must accompany every obligation to certify that fiscal law time and purpose requirements are met.
- Each year we prepare an annual assurance statement that management controls throughout the command are in place, operating, and effective.
- Under MCP, we track all regulatory compliance annually and audit material weaknesses (fig. 7.5-50), initiating corrective actions.
- We use audits to find and correct regulatory or procedural deficiencies (figs. 7.5-32, -44, table 7.5-5).

**1.2a(2) Anticipating public concerns** To anticipate public concerns and inform the public of risks, we use the approach in fig. 1.2-1. Because our missions directly affect the public, we take extra measures to involve the public in the decision-making process. Ordnance and Explosives (OE) removal and environmental restoration processes include a call for public comment on alternative solutions to cleanup challenges. We include public participation throughout the process—from interviews of residents during site investigations to public meetings that discuss alternative actions to news media tours during removal actions. Our standard public involvement effort includes public meetings and notices; the establishment of an administrative record for public review; community activities, such as tours, media days, and open houses; and the establishment of a restoration advisory board (RAB), which is a committee of stakeholders (fig. 7.5-49).

Often mere compliance is not enough. The execution of our OE Program is a primary case where existing laws and regulations fall short. Therefore, as the center of expertise for OE, we develop policy guidance to fill the gaps and address public risk. We further shape policy by serving on DOD and Army boards that are developing OE regulations.

Many of our PIP improvements also go beyond mere compliance and institute proactive measures:

- Amended Public Responsibility SOP to include public feedback at conclusion of Corps' efforts.
- Improved public involvement processes at formerly used defense sites in Virginia, Colorado, and Texas from our PIP.

- Recommended recovered chemical warfare materiel process changes based on our public and media feedback plans of action.
- Increased information exchange with South Dakota State government based on news media analysis of project coverage.
- Increased efforts to explain business processes to employees through orientation briefings, town hall meetings, and the “It’s Our Business” fact sheet.

### 1.2b Support of Key Communities

*Citizenship policy.* Our commander issued a policy memorandum that supports and institutionalizes corporate citizenship. The policy encourages employee involvement through a liberal leave policy for volunteers, a “Volunteer of the Year” award,

and the publicizing of corporate citizenship internally and in local newspapers.

*Organizational community support.* Leaders meet with our mayor, chamber of commerce, and Federal representatives on community needs, items of mutual interest, and our area’s economy. We use the internet, fact sheets, and news releases to keep our community and customers informed of mission-related activities.

Table 1.2-1 shows other community support provided through Huntsville Center or through individual volunteers. We target five areas for local support.

Table 1.2-1. Huntsville Center community involvement

| Support Target Areas         | Results  |
|------------------------------|--|
| Educational Support          | Our Outreach Program, initiated through strategic planning (table 2.2-1, team 14), establishes a relationship with students and schools to provide continuous contact with a diverse group of young people from early education through college. Established MOA with Chapman Middle School to provide computers, career counseling, and other support.  |
|                              | Adopt-A-School: Partnered with Alabama A&M University in the Historically Black College Adopt-A-School Program, serving on the Engineering Technology Advisory Board and assisting A&M with engineering technology accreditation requirements.   |
|                              | Public Service Recognition Week: Coordinated savings bond donations for school essay contests.   |
| Local Business Support       | Minority Expo Business Fair, Huntsville Business Fair, Industry Briefing/Business Opportunities Fair, Federal Dollars & Sense Women-owned Business Symposium: Held symposiums and provided exhibit and speakers from the government sector to discuss contracting issues and procedures; earned award for participation from North Alabama African-American Chamber of Commerce.                         |
|                              | Small Business Open House: Invited over 200 small business contractors to visit and meet with project managers.  |
| Professional Society Support | Society of American Military Engineers (SAME), Huntsville Post: Organize local technical seminars for mandatory engineers’ professional development required by Alabama law; participate as speakers at meetings; provided scholarship assistance; organize annual Engineer Run for SAME’s scholarship fund.   |
|                              | American Society of Civil Engineers (ASCE): Active as members, officers, speakers, and on committees.  |
|                              | National Contract Management Association (NCMA), Huntsville Chapter: Supported educational programs in business or contracting; members recognized by NCMA as certified professional contract managers; our Director of Contracting serves as a board advisor for the Huntsville Chapter and is a nationally recognized fellow; employees are active as members and serve as officers and on committees. |
|                              | Association of Government Accountants: Volunteer income tax assistance to local low-income residents.  |
|                              | Professional Secretaries International: Serve as members on committees, boards, officers.  |
| Community Needs              | American Red Cross: Support by hosting monthly blood drives; serve on board of directors. Received Blood Service Award from the Commander of Aviation and Missile Command (AMCOM).   |
|                              | Combined Federal Campaign: fig. 7.5-51.  |
|                              | Huntsville City Board of Zoning and Adjustment; Madison County Planning Board ; Storm Water Management Board; Huntsville’s Planning Subcommittee; Research Park Advisory Board: Serve & advise.  |
|                              | Our employees volunteer to support the Child Advocacy Center; Special Olympics; Meals-On-Wheels; Salvation Army Soup Kitchen; Adopt-An-Angel program; Christmas Charities, Mountain Outreach program, Habitat for Humanity, Prison Ministry, math and science competition, Boy & Girl Scouts.  |
| Local Environmental Support  | Alabama’s Executive Environmental Advisory Council: Advise on environmental issues.  |



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## ***2.0 Strategic Planning***

## 2.1 Strategy Development

### 2.1a Strategy development process

#### 2.1a(1) Strategic planning process

- ① Fig. 2.1-1 shows our strategic planning process, which is guided by the Corps of Engineers' Campaign Plan and our charter (Overview paragraph 1).
- ② Each November, we review our mission, market, values, and guiding principles and analyze strengths, weaknesses, opportunities, and threats (SWOT) that could affect objectives.
- ③ Using that information, we develop our long-term corporate strategy through our corporate operations plan, which identifies key success factors (KSF's) and supporting strategies, goals, and measures as summarized in table 2.2-1.
- ④ Strategy is further deployed through team plans based on corporate strategy. These plans are the annual implementation of long-term plans.
- ⑤ Plans are reviewed and updated throughout the year by leaders during quarterly PRB's or Business meetings. (See fig. 1.1-1, box ⑤, and table 1.1-1.)
- ⑥ Improvements to the strategic planning process are made through our annual gap analysis (fig. 1.1-3) and strategic planning review.

**2.1a(2) Key factor data gathering and analysis** Key data from our SWOT are integrated and analyzed to determine the impact on our key success factors as shown in table 2.1-1.

① *Customer and market requirements.* Market, stakeholder, and customer requirements are

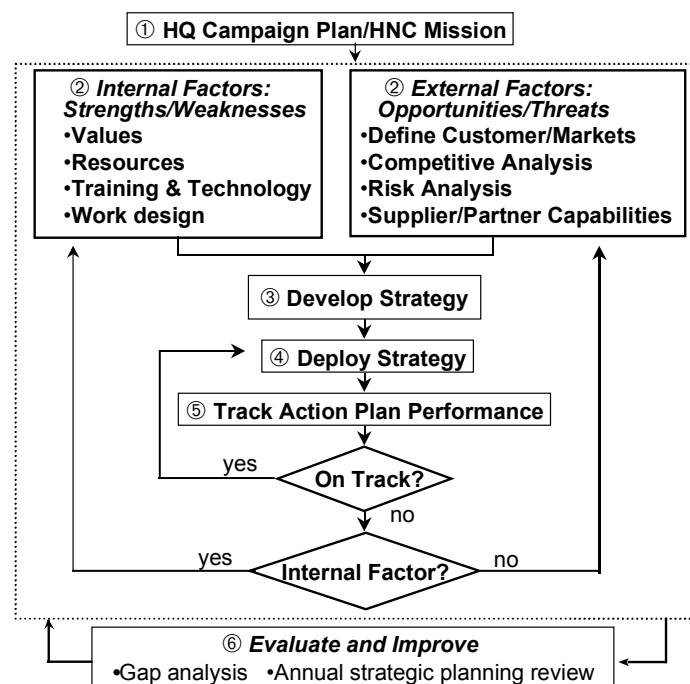


Figure 2.1-1. HNC strategic planning process

gathered in several ways (3.1a, 1.1a(3), and 1.2). Analysis showed that the market is generally concerned about high costs and efficiency. We, therefore, concentrate on improving productivity and applying accounting practices that ensure fair and accurate distribution of overhead costs.

② *Competitive environment.* Our customers want quality services and products at competitive costs. Therefore, we set goals through comparisons to similar providers and keep abreast of new technologies. Reasonable costs, high quality work, process improvement, and innovative application of technology have earned us new work (3.1a(3), table 3.1-3).

③ *Potential risks.* Financial risk evaluation is based on HQUSACE Campaign Plan assumptions, Corps policies, privatization, and customer funding reductions. We minimize risks by increasing productivity through process improvement. We evaluate and decrease our societal risks as described in 1.2. Because we have a world class safety record, we have no strategic initiative for safety. However, we monitor and revise safety practices continuously through our team measures.

Table 2.1-1. SWOT analysis alignment to KSF's

| SWOT Factor                      | KSF  | Analysis   | Data  |
|----------------------------------|--|--|---|
| ① Define customer & market needs | Focus on customer/market needs.  | Customer needs.<br>Customer plans.<br>Referrals.<br>Satisfaction w/HNC.<br>Satisfaction compared to competitors.<br>Market trends.<br>Market growth. | table 7.1-1<br>questions 16 - 20;<br>figs. 7.1-1 thru 7.1-11;<br>7.2-16 thru 7.2-19 |
| ② Competitive environment        | Focus on customer/market. Revolutionize effectiveness.                   | Competitive comparisons.<br>Customer needs.<br>HNC execution of programs.  | figs 7.1-3, -4;<br>7.2-3 thru 14, 7.5-41;<br>tables 7.1-1, 7.2-1, 7.5-1, 7.5-2      |
| ③ Risks                          | Focus on customer/market. Revolutionize effectiveness. Invest in people. | Market growth vs in-house capabilities.<br>Customer satisfaction.<br>Customer req'mts vs HNC focus.<br>Potential safety                              | figs 7.2-3, 7.2-17, -18, -19; 7.1-1, -9, 10; 7.1-5, -8; 7.3-1, -2, -3, -11          |
| ④ Human resource capabilities    | Focus on customer/market. Revolutionize effectiveness. Invest in people. | Skills.<br>Satisfaction.<br>Retention.<br>Demographics.  | figs 7.3-1 thru 14  |
| ⑤ In-house capabilities.         | Revolutionize effectiveness. Invest in people.                           | Process capabilities.<br>Competitive comparisons.  | figs 7.5-1 thru 51, tables 7.5-1 and 7.5-2  |
| ⑥ Supplier/Partner capabilities  | Focus on customer/market. Revolutionize effectiveness.                   | Supplier capabilities.<br>Supplier performance.  | figs 7.4-1 thru -16   |

④ *Human resource capabilities/needs.* We identify technical and management capabilities that we must maintain or develop to support changing product line needs, retraining, and professional development. Two strategic actions, 360 peer review and team structure, help us reduce boundaries, build teamwork and customer focus, and identify training.

⑤ *Operational capabilities.* Senior leaders evaluate our capabilities through the MCG, PRAC, IMC, and the Training Committee (fig. 1.1-1, box ⑥, and 1.1b(2)). Then during planning, we match opportunities with in-house capabilities. Our team structure, for example, enables us to transfer skills from one project to another when opportunities change.

⑥ *Supplier/partner capabilities.* Supplier issues identified in partnering sessions, the IPR's listed in table 1.1-1, and PRB's are reviewed during strategic planning. To evaluate supplier capabilities, we use supplier databases (table 4.1-2 and item 6.3). We develop long-term relationships with suppliers through multi-year, multi-award contracts (Overview, para. 9). Also, we leverage Corps districts and labs to create for our customers a virtual organization that is effectively twice as large as the Huntsville Center (Overview, table 2), and our plan includes an action for developing partnering agreements with all military Corps regional business centers.

### **2.1b Strategic objectives**

Our FY2004 end-state in table 2.2-1 aligns with the Corps of Engineers vision, Corps policies on work distribution, and legal limits on government competition. We plan to maintain our size while increasing productivity. As shown in table 2.2-1, KSF's for achieving our goal are as follows:

- *Focus On Customer and Market Needs.* Strategic initiatives target our charter, mission authorities, and customer focus to achieve our end-state 2004. These long-term (5-year) initiatives are executed through annual team plans.

- *Invest in People.* Human resource initiatives ensure that we continue to be a learning organization that is flexible, innovative, and customer focused. These are on a two-year timetable with progress evaluated semi-annually.

- *Revolutionize Effectiveness.* These initiatives focus on improving operational capabilities. Business plans, developed by teams, deploy strategic goals to all levels of the organization. They are the basis of quarterly PRB review (table 1.1-1).

Para. 2.1a(2) and table 2.1-1 explain the rationale behind our KSF's and SWOT alignment with them.

## **2.2 Strategy Deployment**

### **2.2a Action plan development and deployment**

#### **2.2a(1) Action plan development**

To ensure alignment with our KSF's, action plans are developed, deployed, and updated as follows:

*Step 1:* Identify areas of risk relating to our KSF's (table 2.1-1) based on HQUSACE campaign plan, our mission, and our SWOT analysis.

*Step 2:* Prioritize risk areas according to the criteria in 1.1b(2).

*Step 3:* Develop and evaluate strategies based on the criteria outlined in 1.1b(2) and best practices/lessons learned from PRB's.

*Step 4:* Select final initiatives as action plans based on cost, importance to success, and the probability for successful implementation.

*Step 5:* Track progress as outlined in fig. 2.1-1.

**2.2a(2) Human resource plan** Our operations plan includes human resource planning as summarized in table 2.2-1, *Invest in People*. Action plans include employee training, teaming, work design, evaluation and recognition, and recruitment.

**2.2a(3) Allocated resources** During strategic planning, a team champion is assigned for each objective. Formal or informal implementation plans include time requirements and assigned personnel resources. Plans address technology and equipment needs. For example, team 10 (continuously improve 360 and teaming) identified required software procurements.

**2.2a(4) Key performance indicators** Table 2.2-1 summarizes key measures for tracking action performance. Table 4.1-1 shows how key success factors align with organizational performance.

**2.2a(5) Align, deploy, and communicate** As shown in fig. 2.1-1, overall corporate direction and operational objectives are based on internal and external factor analyses. Second, strategies are deployed through action plans. Third, all Center employees are members of the corporate team as well as a product line or functional team. Each team has documented performance goals and measures that support the Center's operation plan. Fourth, progress toward goals is reviewed by leaders (table 1.1-1). Team measures and goals are posted on the intranet and status is posted on team bulletin boards and published quarterly in the Program Review and Analysis. Fifth, employee awards are based on achievement of team goals to ensure deployment down to all work units and individual employees.



Table 2.2-1. HNC (Strategic) Operations Plan summary

| <b>Corps Vision:</b> The world's premier engineering organization, trained and ready to provide support anytime, anyplace. A full spectrum engineer force of high quality, dedicated soldiers, and civilians: a vital part of the Army; engineer team of choice, responding to our Nation's needs in peace and war; a values-based organization—respected, responsible, and reliable.                                       |   |  |   |
|---|---|--|---|
| <b>Huntsville Center End State 2004:</b> Work directly for HQUSACE and viewed as a resource to Corps divisions and districts. Continue to operate worldwide, maintain current product lines, and four key processes: engineering, project management, construction, and contracting. Effectively manage a program of \$800M to \$1.2B with a stable employee base of 600 to 800 employees with the current grade structure. |   |  |   |
| <b>Strategic Key Success Factor:</b> Focus on Customer and Market Needs: Understand customer values and have a broad knowledge of market and customer needs. Ensure continual communication through partnering, marketing programs, and systematic complaint resolution and reporting process.  |   |  |   |
| Strategy  | Objectives  | Measures   | Status  |
| Satisfy the Customer  | Team 12: Improve customer-relations management process.   | Quicker response and improved customer satisfaction.   | Standard procedures developed, use real-time performance evaluations, satisfaction improving.   |
|   | Team 13: Improve Corps-relations thru partnering with new regional business centers.  | # of partnering agreements established; improved customer satisfaction.  | Formal procedures established, working with 3 regional management boards.   |
| Enhance Capabilities  | Team 5: Improve methodology for reviewing changing missions and customers.  | Annual workload changes, product line and customer diversity.  | Formal process implemented and incorporated into strategic planning.  |
|   | Team 2: Establish a team to monitor market trends & propose marketing strategies.   | % growth, # of new programs obtained, # of HNC positions saved or added.   | Marketing training completed, current marketing strategies being revised.   |
|   | Team 3: Develop marketing strategies for joint service and support for others opportunities.  | Increase in work with existing customers and obtain new customers.   | Formal plan implemented.  |
|   | Demil Team: Successfully execute the Chemical Demilitarization Program.   | Cost vs. budget, time growth, audit deficiencies, contractor award fee, lost-time accidents, customer satisfaction.          | All projects currently on time, within budget, customer satisfaction increasing.  |
|   | Demil Team: Market QA and scheduling services.  | % program funding, # of new customers, growth in services provided.  | Action plans under implementation.  |
|   | All Product Teams: Expand responsibilities. Expand Chem Demil Russian and non-stockpile roles and pursue ALT Tech II, become OE program manager for RAC 1 and 2 sites, expand BMD mission, become DOD Medical facilities program manager for new design and O&M, expand Installation Support for OMEE, Energy, Range, and utilities privatization work. | Increased program funding, # of new customers, growth in program responsibility.   | Selected to manage Russian demil construction, briefed ASA, HQ PMCD, and USACE on proposal for ALT Tech II execution; OE authority set in new reg; named BMD facility design and construction program manager; Corps Medical facilities office transferred to HNC; OMEE and Energy ESPC contracts expanded; Range team selected to manage DA RTLP budget. |
| <b>Human Resource Key Success Factor:</b> Invest in People: Be a learning organization that is focused on internal and external customer needs and operates as a flexible, innovative, rapid response team.   |   |  |   |
| Strategy  | Objectives  | Measures   | Status  |
| Build Strategic Commitment  | Team 8: Improve communications to obtain support for HNC strategic plans.   | Increase awareness of HNC missions, innovation, and cost efficiency. Improve Corps working relationships.                    | Communications Plan implemented; 125 new media queries; public queries up 83%.  |
| Reshape Culture   | Team 10: Improve employee working relationships thru 360 and teaming work designs.  | Increase in-house efficiency, improve internal customer satisfaction.  | Improved productivity, work climate and internal customer satisfaction improving (figs 7.2-3, 7.3-2, 7.5-42)  |
|   | Team 9: Tie employee awards to Operations and Business plans.   | Increase cust. satisfaction, increase in-house efficiency, improve work climate.   | System approved 6/98; status reviewed 5/99, awards presented 11/99.   |
|   | Team 11: Tie training to Business Plan, improve training quality.   | Increase in-house efficiency, increase supervisor and employee satisfaction.   | Used for FY99 training plan, new training quality evaluation process under negotiation.   |
|   | Team 14: Improve employee diversity and increase student hires and co-ops.  | # of HNC/school agreements established; # of student employees; # of permanent HNC employees gained from program; diversity. | MOA's with Chapman & Lee schools. Computer lab assistance, math tutoring, support plan for engr'ing magnet program, job application seminar. Six STEP students hired.   |

| <b>Business Key Success Factor:</b> Revolutionize Effectiveness: Be recognized as a leader in business management, high technology engineering services, construction, acquisition, and project management. |  |   |   |
|---|--|---|---|
| Strategy  | Objectives   | Measures  | Status  |
| Align for Success   | QSG/APIC Team: Improve business management processes thru Baldrige.                  | Continued recognition in Baldrige-based quality.                                      | '98 APIC CSA winner; '98 PQA achievement award, '99 PQA merit award, '99 Alabama Quality Award.   |
|   | QSG Team: Become the Corps national business center.                                 | Increased influence on Corps-wide business processes.                                 | Action plans under development, meeting with 3 regional business centers.   |
|   | Team 7: Improve alignment of processes, systems, and resources to the product lines. | Improved market share in identified growth areas; cost/cycle time; cust. sat.         | Redefined product lines, Business Meeting, LIR/PRB.   |
|   | PM/CT Team: Improve supplier management.   | Increased supplier performance, improved strategic planning.                          | Supplier conference July 1999, Performance Base Contracting (PBC) training completed, 7 PBC contracts.  |
|   | Team 15: Share successful processes to other Corps activities and import successes.  | # of processes evaluated, exported, improved; improved cost, cycle time, and quality. | ESPC and simplified O&M shared Corps-wide. Briefed 4 districts & SMDC on our APIC/PQA process. Testing direct charging of certain G&A activities for Corps. |
| Improve Support Technologies and Equipment  | ED/IM Team: Improve product quality thru 3-D design modeling system.                 | Improved productivity and efficiency.   | Using 3-D CADD for Chem Demil Aberdeen and Newport sites.   |
|   | IM/PM Team: Improve IT for projects and sustain HNC program services.                | Improve quality and cycle time within IT budget.                                      | Upgraded e-mail system. Long-/short-term action plans for Corps Y2K expert Y2K support for Air Force Medical.   |

**2.2b (1), (2) Performance projections** Our key performance indicators for out-year projections are product line market performance (table 2.2-3) and our operational and financial measures (table 2.2-4).

We project a \$840M million program by FY2003 based on historical workload, current trends, and customer satisfaction as summarized in table 2.2-3. Since modest growth through increased productivity is our primary objective, program increases can be managed with minimal staffing increases. We have been doing that successfully since FY95. As table 7.2-1 shows, we have dramatically increased operational efficiency and significantly reduced cost to our customers through teaming, innovative practices, and boundary reduction. Our high productivity compared to other Corps elements stems, in part, from our ability to fully employ staff through teaming (figs. 7.2-3, -6, -8, -9).

In table 2.2-4, we project that we will continue to be the most efficient Corps organization because, unlike the rest of the Corps, we are 100% reimbursable and do not receive direct congressional appropriations. Therefore, we rely on our high levels of customer loyalty to retain and generate work. Because customers like our quality but rated us lowest in cost (fig. 7.1-4), we target productivity to strengthen that loyalty.

*Table 2.2-3. Product line projections*

| Product line                     | Figure            | Workload Projections                                       |
|----------------------------------|-------------------|--|
| Chemical Demilitarization        | 7.2-18, 7.1-9,-10 | Up \$492M thru 2003, decline after 2003 without new plants |
| OE                               | 7.2-18, 7.1-9,-10 | Stable at \$50M annually                                   |
| Medical                          | 7.2-19, 7.1-9,-10 | Increase to \$55M annually                                 |
| BMD                              | 7.2-19, 7.1-9,-10 | Increase to \$20M annually                                 |
| Installation/Ops. Forces Support | 7.2-18, 7.1-9,-10 | Increase to \$220M annually                                |

*Table 2.2-4 Center-wide trends and projections*

| Key Measure          | Figure                                   | Projections                        |
|----------------------|--|------------------------------------|
| TLM                  | 7.2-9, -10, -11, 7.5-40, table 7.2-1     | Corps best, exceed industry        |
| G&A                  | 7.2-8, table 7.2-1                       | Corps best, maintain 24%           |
| Direct Chargeability | 7.2-13, -14, table 7.2-1                 | Corps best, exceed industry        |
| Customer retention   | 7.1-9, 7.2-17                            | 70% old, 30% new customers         |
| Productivity         | 7.2-5, -7a, -7b, -12, 7.4-4, table 7.2-1 | Corps best, among best in industry |



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## ***3.0 Customer Focus***

### 3.1 Customer and Market Knowledge

#### 3.1a(1) Determining customer groups and markets

Our charter, our ten areas of expertise, and the HQUSACE Board of Directors define our competitive limits. Laws, regulations, and manpower ceilings also limit competition. For example, without specific authority, we are not allowed to compete with private industry. In addition, HQUSACE regulates new work distribution within the Corps of Engineers. Within those narrow limits, we study the military market for areas that could benefit from our services. As a result, we segmented our business into product lines to meet various market needs. We also segmented our customers into the three groups in table 3.1-1 for further market perspective (fig. 7.1-6). Using all that information during annual strategic planning (2.1), we determined our FY2004 end-state as stated in table 2.2-1.

Table 3.1-1. Product line customer groups

|  |
|--|
| <b>Command group.</b> The highest level of the organization. Concerned with policy and overall execution. Deals with all aspects of the program and how the program relates to other agencies. |
| <b>Program group.</b> Deals with fiscal performance and execution of tasks at the program level. Programs are generally large and diverse and are direct-funded efforts.                       |
| <b>Project group.</b> Deals with fiscal performance and execution of tasks. In contrast to programs, projects are more narrowly focused, with shorter, defined time limits.                    |

**3.1a(2) Determining key requirements** Table 3.1-4, column 2, shows our product line listening and learning strategies. Table 3.1-2 shows what data we obtain and how we use it to determine customer requirements that will affect purchasing decisions. The information obtained is used to revise listening and learning strategies and develop or update customer project management plans. It is also used corporately in our strategic planning process (fig. 2.1-1) to update the Center's operation plan (table 2.2-1, teams 2, 3, and 12) and supporting product line business plans.

Table 3.1-2. How we use data from collection methods listed in table 3.1-4

| Focus                            | Data and Analysis Tools   |
|----------------------------------|---|
| What we learn about needs        | <ul style="list-style-type: none"> <li>•Key requirements: cost, responsiveness, quality, safety</li> <li>•Unique needs: design, construction, maintenance, ordnance removal, deployed forces support</li> </ul> |
| How we identify purchase drivers | <ul style="list-style-type: none"> <li>•Market data: industry expos, technology forums, working groups</li> <li>•Customer data: current &amp; new customer needs, lost customer analysis, complaints</li> </ul> |
| How we evaluate data             | <ul style="list-style-type: none"> <li>•LIR's, PRB's, IPR's (table 1.1-1)</li> <li>•Customer satisfaction data analysis (fig. 3.2-1)</li> </ul>   |

#### 3.1a(3) Determining product and service features

Fig. 3.1-1 shows our corporate process for defining and documenting customer requirements, product and service features, and customer access needs in table 3.1-4. To determine technical needs and communication preferences, we hold partnering meetings with customers. We then document customer requirements in MOA's and/or PMP's; clarify and reinforce them through further partnering sessions and customer visits; track them through IPR's, LIR's, and PRB's (table 1.1-1); and modify them through configuration management, as needed (6.1a). Performance measures for key requirements are used to determine if we met requirements (table 4.1-1). Also, our product delivery performance report cards and our annual customer survey provide information on customer likes and dislikes (3.2).

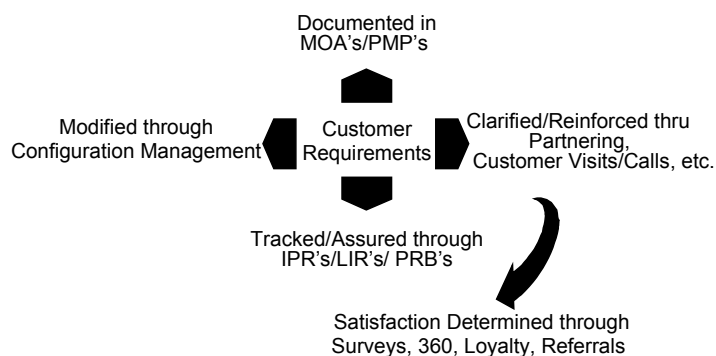


Figure 3.1-1 shows how we determine and manage customer requirements, receive feedback on recent transactions, and update the listening and learning strategies and access methods in table 3.1-4.

To determine long-term requirements, we:

- Review customers' current requirements.
- Survey customers' future needs (table 7.1-1 #18).
- Analyze DOD guidance, the program objective memorandum (POM), and federal legislation.
- Attend industry expos, technology forums, and technical working groups.

Our ability to project customer and market needs has resulted in more work as shown in table 3.1-3.

Table 3.1-3. Increased work resulting from improved product and service features

| Product line              | New work/Customers   |
|---------------------------|--|
| Installation Support      | Center for Public Works energy program                       |
| Medical Program           | Medical Facilities Office                                    |
| Ballistic Missile Defense | National Missile Defense central manager for facility design |
| Chemical Demil            | Russian Demil facility construction                          |
| Ordnance & Explosives     | Ft. McClellan BRAC   |

Table 3.1-4 Product line communications methods

| Product Line                      | Listening and Learning Strategies   | Customer Access   |
|-----------------------------------|---|---|
| Demilitarization                  | Daily dialogue, weekly conferences, monthly visits, monthly face-to-face meetings, partnering, ERG, PRT, draft statements of work review by customer, customer survey, 360.   | Assigned project manager, liaison at customer facility, website, monthly management review meetings, IPR's every 6 weeks with customer, contractor, suppliers.  |
| Ordnance and Explosives           | Pre-planning meetings, weekly tracking of customer feedback, quarterly IPR's, JPG tests, UXO Forum and other tech. conferences.   | Assigned project manager, website, new customer survey, product/service survey, annual report, OE newsletter.   |
| Installation Support              | Partnering and planning sessions, quarterly updates and IPR's, team and interface meetings, conferences, seminars, configuration control boards, liaison customer facilities, draft RFP's sent to customer for comment, national conferences, customer/product surveys, site visits to end user, 360. | Assigned project manager, team leader liaison, bulletin boards updating documents, website, pagers, design manuals on the Internet, database allowing customer project status for CDUP, technical working groups, hotlines for Ranges, TRACES, and PAX. |
| Operational Forces Support        | Direct consultation, teleconferences, tri-annual planning sessions, IPR's, conferences, customer/product surveys, 360.  | Assigned project manager, DOG pamphlet in electronic format, annual Senior Leader Conference.   |
| Medical Program                   | Daily telephone dialogue, weekly team meetings, monthly LIR's, quarterly IPR's, site and customer visits, customer project documents review.  | Assigned project manager, website, pagers, central database, monthly reports, continual contact with facility reps.   |
| Ballistic Missile Defense Program | Daily telephone dialogue, monthly LIR's, customer/partner meetings, customer survey, 360.   | Assigned project manager, pager for primary POC, quarterly IPR's, weekly VTC with customers and partner, bi-weekly customer meeting, site and customer visits.  |

Increases in the Installation Support and Medical Programs resulted from marketing a time- and money-saving maintenance, repair, and renewal process we developed for our Energy Program. Our work for National Missile Defense was built through our long-term reputation in Ballistic Missile Defense work. The Russian Demil Program was transferred to us per customer request based on our current and past performance.

**3.1a(4) Keeping listening and learning current** Table 3.1-5 shows processes used to evaluate and improve current and future listening/learning approaches:

Table 3.1-5. Improving listening and learning

| Process Used                              | Real-time actions | Strategic Plans |
|---|-------------------|-----------------|
| Customer Management Process (fig. 3.1-1)  | √                 | √               |
| Complaint Management Process (fig. 3.2-1) | √                 | √               |
| Gap analysis (fig. 1.1-3)                 |                   | √               |

Listening and learning strategies are updated as customer requirements change (fig. 3.1-1) and issues are resolved (fig. 3.2-1). Data from all three processes are aggregated and evaluated during strategic planning (fig. 2.1-1) and incorporated into the operations plan as needed (table 2.2-1, teams 2, 3, and 5).

### 3.2 Customer Satisfaction and Relationships

#### 3.2a Customer relationships

**3.2a(1) Accessibility** Our project management process is our primary system for ensuring strong customer focus and close contact with the customer. Each project customer has its own project

manager (PM), who is the primary customer contact.

As shown in fig. 3.1-1, we then determine individual customer contact requirements in table 3.1-4 during initial partnering sessions. To meet changing requirements, we update approaches through IPR's, other customer reviews, or requests to the PM.

To ensure that customer contact is continuous and proactive, management policy requires that the staff initiate frequent personal contact with customers.

**3.2a(2) Deploying contact requirements** Table 3.2-1 summarizes our standard customer service process, including major customer contact points, key requirements of the contacts, and adequacy indicators.

Table 3.2-1. Standard key customer service process

| Key Contact        | Key Requirements   | Key Indicators                      |
|--------------------|--|-------------------------------------|
| Making the deal    | Key players attend meeting, product needs, resources required, delivery timeline | MOA or formal agreement             |
| In-process reviews | Milestones defined cost/schedule status  | Up-to-date Project Management Plans |
| Product delivery   | Meet product needs and teamwork agreements                                       | Product/service performance review  |

With 500 projects to execute, our challenge is to tailor processes to individual requirements. We do that through our integrated process teams (IPT's). Lead by a PM, IPT's are cross-functional teams that integrate processes to deliver specific products and services. IPT members become knowledgeable of specific contact requirements through team meetings and MOA's/PMP's. To reinforce the importance of customer focus and communication, IPT perform-

ance measures include customer satisfaction ratings. Goals are based on comparisons with similar providers (figs. 7.1-1, -3, -5). We receive high ratings for flexibility in responding to needs and seeking requirements (figs. 7.1-1, -3, #'s 1 and 8). Also, external customers also rate IPT members through 360.

**3.2a(3) Complaint management** Fig. 3.2-1 shows the flow of our complaint management process. PM's receive complaints through communication methods in table 3.1-4, our management process in fig. 3.1-1, or surveys. PM's analyze complaints and ensure that problems are resolved either within the team or through higher levels. Customers are included in and approve resolutions. Customer satisfaction data and concerns are shared at LIR's/PRB's. To ensure that complaints are answered promptly and satisfactorily, IPT team award measures include customer satisfaction goals. Our customer survey team independently conducts the annual survey and collects the data. The survey team analyzes data by command group (table 3.1-1), product line, and individual PM, aggregating and

reporting findings to the PM and the LIR/PRB. All customers who rated us below 3 in any category are contacted quickly (fig. 7.1-8). In addition, directors send letters to respondents, staffed through the commander for signature. The letters address corrective actions on specific issues. PM's develop improvement plans that become part of their business action plans and are briefed at the PRB.

Since 1995, we have increased our customers' satisfaction in how we solicit, listen to, and resolve concerns (fig. 7.1-1, question 4).

**3.2a(4) Building relationships** We build customer relationships in two ways:

- *Customer-focused culture.* Building customer relations begins with our work design, which aligns along internal and external customer service as described in 5.1. We strengthen these relationships through our customer management and complaint processes (figs. 3.1-1 and 3.2-1) and 360 review and team performance awards.
- *Strategic planning.* We also build customer relationships through our operations plan KSF "Focus On Customer and Market Needs" (table 2.2-1).

Our customer satisfaction survey shows a high level of customer loyalty: 94% said that we would be their choice for future work, 95% said they would recommend us to other organizations, and nearly 35% stated that they knew of other organizations that would benefit from our services (table 7.1-1). Good relationships with customers gained us work as described in table 3.1-3 and charted in figs. 7.2-17, -18, -19.

**3.2a(5) Evaluation and improvement** We continually refine customer access methods in table 3.1-4 through our customer management process in fig. 3.1-1, annually through our customer satisfaction survey (table 7.1-1, questions 1, 4, and 9), and annually through our gap analysis (fig. 1.1-3). Table 3.2-2 summarizes customer access improvements.

Table 3.2-2. Access/relationship improvements

| Review process   | Improvements  |
|--|---|
| Customer management process (fig. 3.1-1)                                   | Improved PMP's. Top management involvement emphasized.                              |
| Annual Survey analysis (table 7.1-1) and complaint management (fig. 3.2-1) | Product performance report cards. Required PM weekly customer contacts.             |
| Gap analysis (fig. 1.1-3)  | Customer management SOP. Customers included in 360 ratings. Team performance goals. |

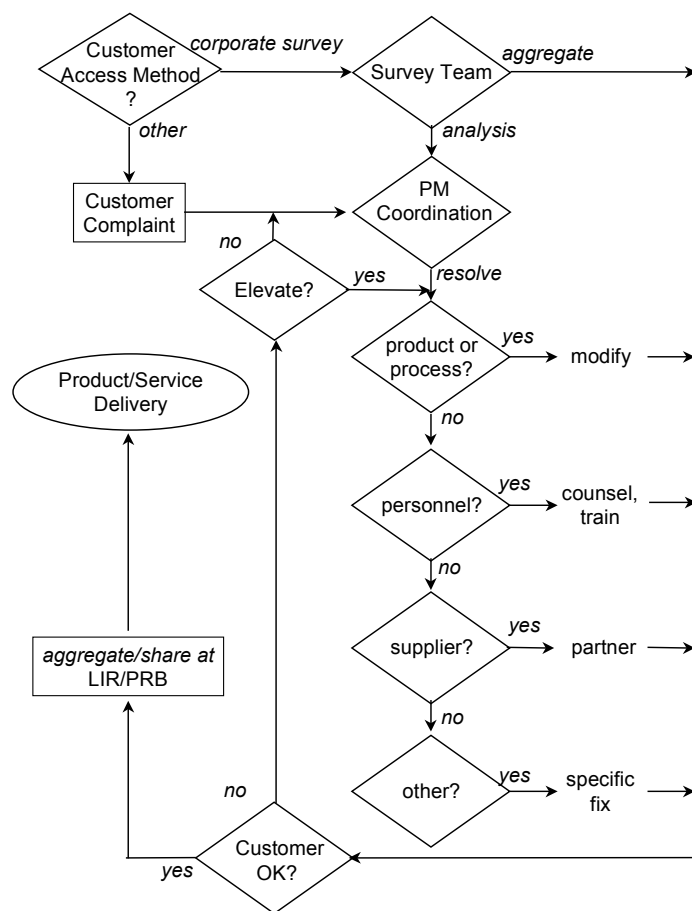


Figure 3.2-1. Complaint management process



Furthermore, during strategic planning, we developed several strategic initiatives through our annual SWOT analysis specifically aimed at building customer relationships (table 2.2-1):

- Team 2: Establish a team to monitor market trends and propose marketing strategies.
- Team 3: Develop marketing strategies for joint service and support for others opportunities.
- Team 5: Improve methodology for reviewing changing missions and customers.
- Team 12: Improve customer-relations management process.
- Team 13: Increase formal partnering with Corps regional business centers.

### **3.2b Customer satisfaction determination**

#### **3.2b(1) Satisfaction determination methods**

- *Customer retention and referrals.* Fig. 7.2-17 shows development of our customer base since 1969. We also track customer retention and referrals through customer satisfaction survey questions (table 7.1-1, #14, #16, #18, #19). Fig. 7.1-9 shows long-term customers.
- *Market growth.* Market data discussed in 3.1a(3) and summarized in table 3.1-3 and current and projected workloads from tables 2.2-3 and -4 and figs. 7.2-17, -18, -19 are also satisfaction indicators.
- *Product/service performance.* Product lines have tailored performance “report cards” provided to customers at product/service delivery. Such performance data and rework rates are used to project satisfaction and validate annual customer satisfaction results (fig. 7.1-11 and table 7.1-2).
- *360 feedback.* Another tool for customer service satisfaction is our 360 review (1.1a(1), 5.1a(3)). Employees in the GS/GM 13-15 group include external customers as raters.
- *Comparison to similar providers.* See 3.2b(3).
- *Annual External Customer Survey.* Our annual customer satisfaction survey process is a Center-wide tool for determining customer satisfaction. Survey results are acted upon as shown in fig. 3.2-1, with low scores addressed through improvement plans. Our annual customer satisfaction survey data are analyzed and used in several ways:
  - >To determine customer satisfaction Center-wide (figs. 7.1-1, -2).
  - >To determine customer satisfaction for market segments (figs. 7.1-6).
  - >To determine areas of improvement (fig. 7.1-8).

- >To determine/rank customer needs (table 7.1-1, #17 and #18, fig. 7.1-5).
- >To compare to similar providers (table 7.1-1, #16, figs. 7.1-3, -4).
- >To obtain seek new customers (table 7.1-1, #19 and #20).
- >To seek future customer needs (table 7.1-1, #18) as described in 3.1a(3).

**3.2b(2) Follow-up on recent transactions** IPT’s seek feedback on recent transactions through IPR’s or partnering meetings (fig. 3.1-1). Such regularly scheduled reviews with customers and suppliers ensure that the customer is satisfied with project progress. IPT’s find it beneficial to seek customer feedback through real-time performance data requests at key milestones and at product delivery. Even more, PM’s have continual contact with their customer through daily dialogue, weekly conference calls, and visits to customers. For issues elevated to higher levels, senior managers or the commander calls or visits the customer.

**3.2b(3) Customer satisfaction and competitors** We determine customer satisfaction relative to similar providers by comparing our annual customer satisfaction survey results Corps-wide and with individual Corps military districts and MSC’s (fig. 7.1-3, -4). Because HQUSACE adopted our customer survey for Corps-wide use, we have an objective and parallel method for comparing customer satisfaction data to similar providers. Corps comparisons are critical to fulfilling our strategic objectives because our primary threat is HQUSACE distribution of work. Table 7.1-1 #16 shows customer satisfaction compared to our competitors/similar providers.

**3.2b(4) Evaluation and improvement** We evaluate and improve our satisfaction determination process through our annual gap analysis (fig. 1.1-3). Improvements made since 1995 include:

- Aggregated and analyzed customer satisfaction data Center-wide and tracked corrective action plans for dissatisfied customers through a formally established survey team.
- Segmented survey results by product line, directorate, individual projects, project managers, and command levels.
- A weighting factor (fig. 7.1-5).
- Revised/new questions to meet changing needs.
- Satisfaction compared to competitors.
- Referral potential.
- Review customer satisfaction at PRB’s.



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## ***4.0 Information and Analysis***

#### 4.1a Measurement of Organizational Performance

##### 4.1a(1) Addressing major components

##### **Data selection, effectiveness, and integration.**

Our dashboard (table 4.1-1) shows how our metrics align with our three key success factors from our strategic plan and our five key requirements—customer satisfaction, cost, quality, schedule, and safety, which comprise our business fundamentals. Measures are developed and revised through annual strategic and business planning based on strategic goals as explained in 2.0. Then, to align process and product performance with corporate goals, product and functional teams translate key success factors and requirements into process and product performance measures during annual business planning. That approach enables us to deploy strategies and goals to all levels of the organization and to consolidate key data for Center-wide performance monitoring. Corporate performance is reviewed primarily through the LIR/PRB process and monthly Business Meeting (1.1b(1)). Finally, we link team performance to corporate strategy through our team awards system (5.1). Those performance awards are based on team goals developed during business planning.

**Key comparative data selection, effectiveness, and integration.** Asterisks on the HNC Dashboard shows how comparative data align with our key success factors and requirements. Through analysis of market and customer expectations, we found that cost is the determining factor in sustaining our strategic goals. Because customers are satisfied with quality, we concentrate on comparing our productivity and costs to similar providers through the following criteria:

- Our customers think we cost too much. Customers are satisfied with our quality (as determined by surveys, referrals, repeat business, etc.), but they rate us lowest in cost (fig. 7.1-1).
- HQUSACE targets cost concerns via two strategic planning assumptions: (1) Federal funding will continue to decline and (2) the Administration will continue to support government reinvention initiatives. Therefore, productivity, cost, and customer satisfaction with cost are key factors concerning Corps work distribution.
- The comparison of cost efficiency measures aligns with requirements of Government Performance and Results Act of 1993.

We seek comparative data from (1) sources that are reliable, (2) organizations that perform

work similar to our critical functions, and (3) organizations with outstanding performance. Our primary sources are as follows:

- HQUSACE quarterly CMR (1.1b(1)) compares Corps performance against command goals. Those data, then, become the basis for our most critical competitive benchmark: Corps districts with large military programs. Corps districts, more than any other class of organization, operate under the same market, regulatory, and policy restrictions. Furthermore, data are parallel. Finally, HQ work distribution is our greatest risk.
- For comparison to the broader engineering world, we use Harper and Shuman's annual survey of 230 engineering firms.
- We also compare to the industry's top A-E firms through proprietary sources.

**Data and information reliability.** We provide data reliability through internal, independent, and data access controls as follows.

• **Internal controls.** Within the Center, we ensure data reliability through the process outlined in fig. 4.1-1. At ❶ of fig. 4.1-1, data are collected from automated databases (table 4.1-2), customer requirements, and market trends. At ❷, data collected include new work, completed work, schedules, requirements, end strength, new technology needs, capabilities and skills, and manpower, training, and travel requirements. At ❸, project managers submit estimates and projections to our Resource Management (RM) Directorate for validation. If the data are questionable, RM checks the input at ❹, reviewing the submission, comparing it to historical data, workload requirements, and other variables and makes adjustments at ❺.

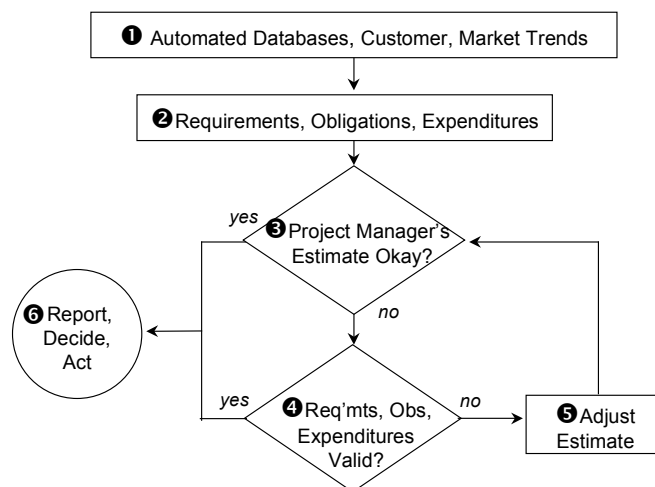


Figure 4.1-1. Internal objectivity/validity controls

Table 4.1-1. HNC Dashboard aligns performance measures to key success factors and key requirements.

| METRICS                                 | FIGURE REFERENCE #   | KEY SUCCESS FACTORS     |                  |                             | KEY REQUIREMENTS |      |          |        |                       |
|---|--|-------------------------|------------------|-----------------------------|------------------|------|----------|--------|-----------------------|
|   |  | Customer & Market Needs | Invest In People | Revolutionize Effectiveness | Quality          | Cost | Schedule | Safety | Customer Satisfaction |
| <b>7.1 Customer Satisfaction:</b>       | <b>7.1-</b>  |                         |                  |                             |                  |      |          |        |                       |
| Satisfaction trends, segmentation, CSI  | 1, 2, 5, 6   | X                       |                  |                             | X                | X    | X        | X      | X                     |
| Satisfaction competitive comparisons*   | 3, 4, Table 7.1-1 # 16   | X                       |                  |                             | X                | X    | X        | X      | X                     |
| Survey response rate                    | 7  | X                       |                  |                             |                  |      |          |        | X                     |
| Dissatisfaction                         | 8  | X                       |                  |                             |                  |      |          |        | X                     |
| Retention, referrals, loyalty           | 9, 10*, table 7.1-1 #s14, 18-20                                  | X                       |                  |                             |                  |      |          |        | X                     |
| Product satisfaction                    | 11 & table 7.1-2   | X                       |                  |                             |                  |      |          |        | X                     |
| <b>7.2 Financial/Market:</b>            | <b>7.2-</b>  |                         |                  |                             |                  |      |          |        |                       |
| Customer savings (equates to profit)    | 1, table 7.2-1   | X                       |                  | X                           |                  |      |          |        | X                     |
| Customer savings competitive comparison | 2*   | X                       |                  | X                           |                  | X    |          |        | X                     |
| TLM, overhead, chargeability            | 8*, 9*, 10*, 11*, 13*, 14*                                       | X                       |                  | X                           |                  | X    |          |        | X                     |
| Workload, productivity                  | 3, 4, 5*, 6, 7a*, 7b*, 12*, 15, 16                               | X                       |                  | X                           |                  | X    |          |        | X                     |
| Market, growth, projections             | 17, 18, 19, Overview figs. 1, 2                                  | X                       |                  | X                           |                  | X    |          |        | X                     |
| <b>7.3 Human Resources:</b>             | <b>7.3-</b>  |                         |                  |                             |                  |      |          |        |                       |
| Employee satisfaction                   | 1, 2, 6*, 7  |                         | X                | X                           |                  |      |          |        |                       |
| Employee development evaluation         | 12, 13, 14   |                         | X                | X                           | X                |      |          |        | X                     |
| Employee well-being                     | 3, 4, 5, 11*   |                         | X                | X                           |                  |      |          |        |                       |
| Diversity                               | 8*, 9*, 10*  |                         | X                | X                           |                  |      |          |        |                       |
| Work System Effectiveness               | 15*, 16, 17, 18, 19, table 7.3-1                                 |                         | X                | X                           | X                | X    | X        | X      | X                     |
| <b>7.4 Supplier Management:</b>         | <b>7.4-</b>  |                         |                  |                             |                  |      |          |        |                       |
| Supplier evaluation                     | 2, 3, 5, 6   |                         |                  | X                           | X                | X    | X        | X      |                       |
| Supplier competitive comparison         | 1*, 4*, 13*, 15*   | X                       |                  | X                           | X                | X    | X        | X      | X                     |
| Supplier on-time delivery/within budget | 7, 8, 9, 15  |                         |                  |                             |                  | X    | X        |        | X                     |
| Supplier quality, safety                | 10, 11, 12, 14*, 16  |                         |                  |                             | X                | X    | X        |        | X                     |
| <b>7.5 Operational:</b>                 | <b>7.5-</b>  |                         |                  |                             |                  |      |          |        |                       |
| Key process quality                     | 14*, 16, 17*, 18*, 24*, 32, 48, 49, 50, tables 7.1-2, 7.5-1      | X                       | X                |                             | X                |      |          |        | X                     |
| Key process safety                      | 7.3-11*, 7.4-14*   |                         |                  | X                           | X                |      |          |        | X                     |
| Key process productivity/efficiency     | 2*, 4*, 5, 12, 13, 15*, 21, 22, 25, 31, 34*, 35, 38              |                         | X                | X                           |                  | X    | X        |        | X                     |
| Key process cost                        | 6, 8, 9, 10, 11, 19, 20, 26, 27, 28, 30, 33, 40, 41, table 7.5-2 |                         |                  |                             |                  |      |          |        | X                     |
| Key process responsiveness              | 1*, 3*, 7, 23, 29, 36, 37, 39                                    |                         |                  | X                           |                  |      | X        |        | X                     |
| Key process customer satisfaction       | 14*, 24*   |                         |                  |                             | X                | X    | X        | X      | X                     |
| Key support process quality             | 42, 43, 48, 49, 50, table 7.5-1                                  |                         |                  | X                           | X                |      |          |        | X                     |
| Key support process efficiency          | 43, 44, 45, table 7.5-4  |                         | X                | X                           | X                | X    | X        |        | X                     |
| Key support process cost                | 43, table 7.5-4  |                         |                  | X                           |                  | X    |          |        | X                     |
| Key support process responsiveness      | 45, 46, 47   |                         |                  | X                           |                  |      | X        |        | X                     |
| Key support process customer sat.       | 42   |                         |                  | X                           | X                |      |          |        | X                     |
| Public responsibility                   | 48, 49, 50, 51   | X                       |                  | X                           | X                | X    | X        | X      | X                     |
| *Competitive comparisons                |  |                         |                  |                             |                  |      |          |        |                       |

Data objectivity is enforced through separation of functions, since PM's report to the civilian deputy and RM reports to the military deputy (fig.5, page v). When the data are approved, they are reported and used for decision making at ⑥. Samples of key actions are shown in table 1.1-2.

- **Independent controls.** Data reliability and objectivity are also ensured through the use of automated databases (table 4.1-2) created and maintained by independent organizations outside our chain-of-command. Within those systems, reliability of data includes daily and monthly reconciliation of subsidiary records and crosschecks with our records. Furthermore, the Army Audit Agency and General Accounting Office audit and validate the systems.

Table 4.1-2. Primary data systems

| System  | Data Type                   |
|---|-----------------------------|
| CEFMS (Corps of Engineers Financial Management System)  | budget, financial, labor    |
| PROMIS (Project Management Information System)  | schedule                    |
| SAACONS (Standard Army Automated Contracting System)  | cycle time/on-time delivery |
| A-E Contract Administration Support System (ACASS), Construction Contract Administration Support System (CCASS), and Service and Supplies Contractors Appraisal Support System (SSCASS) | Supplier performance        |
| ACPERS (Army Civilian Personnel Reporting System)   | human resource, EEO, safety |

- **Data access controls.** User needs for data and analysis type and ease of use are addressed through beta testing, configuration control procedures, and off-line comments to the system proponent. For example, as the beta test site for CEFMS, we have contributed to over 200 system modifications since 1995. Such modifications continuously improve use and reliability. To further ensure access reliability and coordinate information issues on a continuing basis, our Information Management Committee (IMC), comprised of senior leaders, meets regularly.

**Financial impact and correlations supporting planning.** We found that cost is the most critical factor affecting our strategic goals and end-state (table 2.2-1). Cost data enable us to consolidate and correlate critical performance factors across the entire organization:

- **Present and Future Indicator of Financial Health:** Through careful tracking of costs, we

keep projects within budget and develop accurate budget projections and resource allocation.

- **Past and Future Indicator of Productivity:** To calculate productivity, we use expenditures per employee, that is, full-time equivalent (FTE). This gives us workload for trend and comparative analysis. Workload per FTE parallels the concept used by DOD, Office of Management and Budget, and Congress to fund programs.

- **Present Indicator of Quality:** Cost growth, an indicator of rework or inaccurate estimates, is one way we measure quality.

- **Leading Indicator of Competitiveness:** Our financial rates are our key competitiveness factor when marketing our products and services.

- **Leading Indicator of Customer Satisfaction:** Our customer satisfaction has increased (fig.7.1-1) while work has increased (table 3.1-3).

Aggregated cost data, therefore, provide many perspectives on corporate health. Such data are used for decision making from corporate levels to work teams, for assessing our competitive standing, and for reporting to HQ, customers, and other stakeholders. Cost data are critical dashboard measures. In fact, "Maintain Cost Effectiveness" is one of our guiding principles (fig. 1.1-2). Fig. 7.2-1 is the highest level aggregate of all improvement efforts and shows a direct correlation with increased customer satisfaction and new work.

**4.1a(2) Keeping current with changing needs** All measures are reviewed as we refine our strategies, goals, and performance measurements through the approach outlined in fig. 4.1-2.

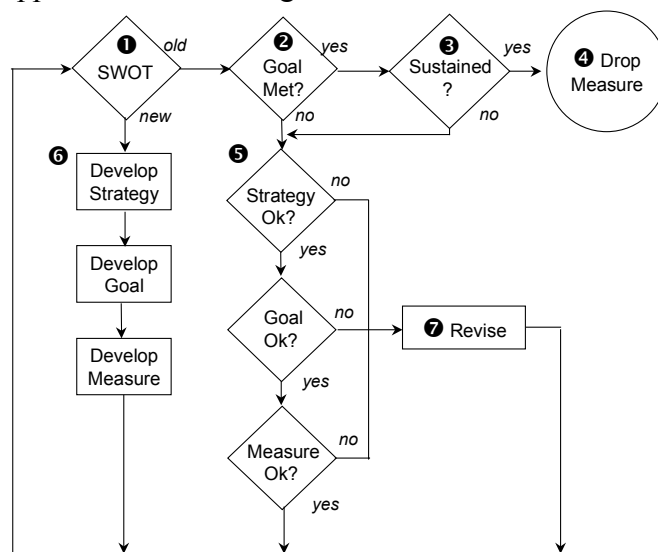


Figure 4.1-2. Updating performance management

In ❶ of fig. 4.1-2, performance of action plans developed through SWOT analysis during strategic and business planning (2.0) are reviewed throughout the year as described in table 1.1-1. If the goal is met in ❷ and performance has been sustained in ❸, then the measure may be reviewed less frequently or dropped completely. If the goal is not met in ❷ or performance is not sustained in ❸, strategies, goals, and/or measures are reviewed in ❹ and revised in ❺. If the SWOT is new, an action plan is developed in ❻.

To ensure continued access and reliability for changing project, program, and customer needs, business plans include information technology requirements, which are coordinated by our IMC (fig. 1.1-1 at ❸). For overall data system improvement, we use our gap analysis (fig. 1.1-4). Furthermore, because proper use of information systems is crucial to data access and reliability, we train users on new information systems. When a new system is introduced, we also provide a transition cell that serves as a help line, or interface, between the proponent and our employees needing questions answered.

#### 4.2a Analysis of Organizational Performance

**4.2a(1) Supporting review and planning** Primarily, we analyze trends, levels, and comparisons.

Through such analyses, we:

- Decide whether a change in direction is needed.
- Determine the impact of a decision or change.
- Project risk and payoff.
- Compare our performance to others.
- Set goals.
- Determine progress toward goals.
- Make correlations.

Table 4.2-1 shows how performance data from our HNC Dashboard supports key organizational planning decisions and actions.

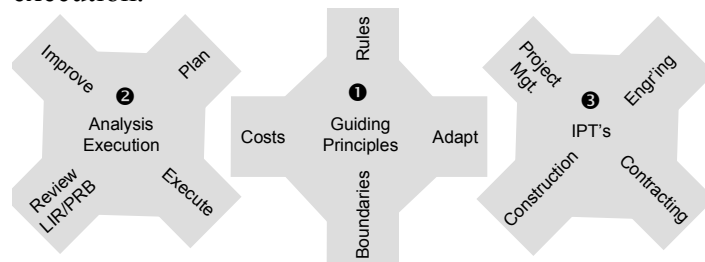
*Table 4.2-1. Key sample findings and correlation*

| Action                         | Correlation Figure References |                         |  |
|--------------------------------|-------------------------------|-------------------------|--|
| Cost-of-Doing Business process | costs down: 7.2-4             | customer sat. up: 7.1-1 | new work up: 7.2-16, -17                       |
| Flexiplace                     | sick leave down: 7.3-3        | climate up: 7.3-1       | productivity rising: 7.2-6                     |
| Team structure                 | productivity up: 7.2-6        | customer sat. up: 7.1-1 | overhead down, chargeability up: 7.2-8, 7.2-13 |

#### 4.2a(2), (3) Linking analysis to daily operations

Analysis deployment is driven in three ways and could be compared to rotating gears as shown in fig. 4.2-1. This model provides for communica-

tion to all levels through direction, planning, and execution.



*Figure 4.2-1. Linking analysis to work unit operation*

• In ❶ of figure 4.2-1, our guiding principles (fig. 1.1-2) provide the overall guidance and analysis summary for strategic direction. That direction is reviewed and updated by leaders annually during our strategic planning SWOT analysis (2.1).

• In ❷, our strategic and business plans cascade goals from corporate-level analysis to team-level action. Plan execution is reviewed and coordinated at the team level (LIR's) and at the corporate level (PRB's) (item 1.1b(1)).

• In ❸, our team structure integrates processes and product lines. Integrated process teams (IPT's), therefore, are populated with process members who communicate between IPT's and process owners. Teams develop their business action plans based on strategic planning and reinforce communication between product lines and processes. Our team performance award system links team performance to the achievement of strategic business plan goals. Finally, IPT's are the communication link with customers, suppliers, and other stakeholders.

Table 4.2-2 shows examples of actions and their link to analyses and the impact on the organization.

*Table 4.2-2. Key sample of analysis link to actions*

| Initiative                      | Desired Results   | Link to Analyses                                  | Results   |
|---------------------------------|---|---|---|
| Team Structure                  | Improve productivity<br>Decrease costs<br>Improve customer satisfaction                   | Customer needs<br>PM study                        | Fig. 7.2-6,<br>Fig. 7.2-4<br>Fig. 7.1-1           |
| 360 Peer Review                 | Improve customer focus<br>Reinforce values<br>Reduce boundaries                           | Benchmark on Army Mgt. Engineering College (AMEC) | Figs. 7.1-1, -3<br>Figs. 7.3-16—19<br>Fig. 7.3-15 |
| Annual External Customer Survey | Project loyalty, referrals<br>Comparison to competitors<br>Increase customer satisfaction | Market trends<br>Gap analysis                     | Figs. 7.1-9, -10<br>Figs. 7.2-2, -3<br>Fig. 7.1-1 |



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## ***5.0 Human Resource Focus***

## 5.1 Work Systems

### 5.1a(1) Work and job design and management

Unique within the Corps of Engineers, our overall work design (fig. 5, page v) aligns elements along internal and external customers instead of functional stovepipes. Elements serving external customers report to our deputy for programs and technical management; elements serving internal customers report to our military deputy. That structure offers many advantages: (1) easy process integration for specific customer requirements, (2) boundary reduction between functional stovepipes, (3) flexibility for changing market and customer needs, and (4) responsiveness and dedication to each customer.

Within that structure, our basic work unit is the integrated process team (IPT). IPT's are cross-functional teams merging the required mix of resources and skills for a specific product or service. Requiring a flatter management structure, teaming helps drive decision making and responsibility to the lowest level possible, thereby increasing productivity, freeing innovation, and enhancing collaboration and initiative. To encourage team cohesion and responsibility, team members evaluate each other's performance through 360 review (5.1a(3)). In addition, team performance is evaluated through team performance metrics.

We adopted our teaming design in 1995. Major improvements since include establishment of 360 in 1996, 360 improvements in 1997-99, and team performance awards in 1998.

In addition, process action teams (PAT's) and various cross-functional employee teams offer employees other opportunities to contribute to Center-wide improvements. For example, a cross-functional employee team developed the process for our team awards performance system (5.1a(4)).

*Table 5.1-1. Measuring work design effectiveness*

| Metric                                  | Figure Reference                                 | Trend    |
|---|--|----------|
| Overall Customer Satisfaction & Loyalty | 7.1-1, -2, -9, -10; 7.2-17, -18, -19             | Improved |
| Productivity                            | 7.2-3, -4, -6, -7a, -7b, table 7.2-1             | Improved |
| Flexibility/Responsiveness              | 7.1-1 #8; 7.1-2                                  | Improved |
| Cost                                    | 7.1-1 #7; 7.1-2, -3; 7.2-1, -8, -9, 10, -11, -12 | Improved |
| Quality                                 | 7.1-1 #'s 6 & 13; 7.1-2, -4; 7.5-50              | Improved |
| Cycle Time                              | 7.5-1, -3, -36, -37, -47                         | Improved |
| Employee-Supervisor Ratio               | 7.3-15   | Improved |
| Innovation                              | Table 7.5-1 awards                               | Improved |

**5.1a(2) Motivation** We reinforce good performance and encourage employees to grow as shown in table 5.1-2. We measure the effectiveness of our motivation policies through our climate survey category 7, "visible commitment to goals," and category 12, "attitude/morale." Both trends are positive (fig. 7.3-1). Furthermore, we attribute our significant productivity increases, in part, to high employee motivation (figs. 7.2-3, -4, -6, -7a, -7b).

*Table 5.1-2. Mechanisms for employee motivation*

| Method                       | HNC Policy for Supporting Method   |
|------------------------------|--|
| management selection process | Applicants for supervisory positions take a leadership Gallup Survey, which becomes part of their rating criteria.                                   |
| management development       | All new supervisors take three high-level leadership courses focusing on motivation.   |
| management example           | Guiding principle 'play by the rules': on a ten-point scale, supervisors as a group average 9.51 in ethics and integrity on 360.                     |
|                              | Supervisors serve as speakers or officers for professional groups, thereby encouraging professional development and service (table 1.2-1).           |
| employee development         | Guided by supervisors, employees plan career paths and training through IDP's (5.2a).  |
|                              | Job rotation through 52 developmental assignments since October 1998 builds experience and confidence.   |
|                              | Our video-based college program makes it easier for employees to seek higher education.  |
|                              | Our innovative ASG (5.2a(7)) encourages support staff to improve skills.   |
| mentoring                    | Our LDP as explained in 5.2a builds leadership potential, experience, and confidence.  |
|                              | Supervisors counsel troubled employees to overcome problems through formal processes outlined in our HNDR 690-1-11 and -38.                          |
| recognition                  | On-the-spot cash and honorary awards, "day-off" awards, and team performance awards build esprit de corps (5.1a(4)).                                 |
|                              | Our Command Bulletin and Huntsville Times Federal Page includes stories and photos of our employees at work and play.                                |
|                              | Our permanent team poster in the lobby features a new team effort each month.  |
| empowerment                  | One purpose of our team structure (5.1a(1)) is to flatten the organization, thereby driving decision making and innovation to lowest level possible. |

**5.1a(3) Performance management** The Total Army Personnel Evaluation System (TAPES) is our primary process for evaluating individual performance, promoting team behavior and customer service, and reinforcing our values. To capture broader evaluation feedback for performance improvement, we began tying TAPES to a "360" performance review for the 1995 rating



cycle. We are the only organization in the Army to execute a “360” peer review through TAPES for evaluating employee performance.

Through 360, each employee selects raters from internal and external customers, co-workers, and subordinates. In addition, immediate supervisors rate their employees, and employees rate themselves for comparison. Employees receive anonymous feedback from their raters. To promote high performance and continuous improvement, all employees develop annual improvement plans in their three lowest-rated areas based on 360 feedback. Feedback and performance improvement is the focus.

360 evaluation factors include team work, customer focus, job knowledge and skills, ethical behavior and values, and communication.

Continuous improvement of 360 is a strategic initiative (table 2.2-1). Cycles of refinement include internet/intranet access, external customer ratings, and criteria refinement. After our initial trial period, we surveyed employees. Sixty-two percent favored 360 over our traditional system.

#### **5.1a(4) Compensation and recognition**

- *Team performance awards.* To supplement the federal compensation system, provide greater motivation for performance excellence, and align team and strategic goals, we implemented a team performance award system in October 1998. Specific team award measures and goals are based on the goals established during strategic/business planning and our five key requirements. If goals are met, all team members receive a monetary award.

- *On-the-spot awards.* Supervisors can award individuals or teams up to \$250 for outstanding on-the-job excellence.

- *Special act or service award* ranging from \$25 to \$25,000 can be given to individuals or teams for a meritorious act, service, or scientific or other achievement.

- *Honorary awards.* Supervisors and/or employees may nominate workers for any of our annual honorary awards presented by our Commander at Business Meetings or our annual awards picnic.

**5.1a(5) Communication, cooperation, sharing** Our primary systems for enhancing cooperation, communication, and knowledge sharing within and between programs are teaming and our PRB’s.

- Our team structure enhances information sharing and communication *within* IPT’s by reducing boundaries between the functional

stovepipes. Cooperation is reinforced through team performance awards, since everyone on a team is striving to meet the same goals.

- Quarterly PRB’s (1.1b(1)), on the other hand, foster the sharing of lessons learned and best practices *between* teams. PRB measures, actions, lessons learned, and best practices are also posted on our website for permanent reference. Sharing between teams includes transferring, improvement, and modification of innovative processes, and gaining of experience and understanding from problems and difficult customers. Through such knowledge sharing, for example, our streamlined maintenance, repair, and renewal (MR&R) process developed by our Energy IPT has been adopted and modified by our Operations and Maintenance Engineering Enhancement (OMEE) team, Medical team, and, most recently, our OE team. This innovative process has become standard practice in-house and throughout the Corps.

- In addition, we continually enhance communication by expanded use of electronic equipment, i.e., e-mail, teleconferencing, intranet, internet, etc. Through video teleconferencing (VTC), we hold weekly staff meetings between Chem Demil offices and BMD teams. We use our intranet to post team measures for employees, Business Meeting charts, PRB actions, and other data.

We measure the effectiveness of our knowledge-sharing, communication, and cooperation mechanisms through the productivity and innovation measures listed in table 5.1-1.

**5.1a(6) Effective personnel recruitment** For filling temporary and permanent vacancies, we enhance our highly regulated personnel selection process with supplemental procedures that include selection panels, Gallup leadership surveys for high grades, and standard question format. Such supplemental procedures help us arrive at consensus on the most highly qualified personnel.

We use a selection panel for supervisory positions and other select recruitment at lower levels. We even use panels for temporary promotions. Panel members include in-house employees at the same or higher level than the recruited position and one HQUSACE member. On each panel, all interviewees are asked the same set of questions based on specific job requirements, ethics, and values. Our equal employment opportunity (EEO) officer reviews every panel recommendation.

To increase new employee success on the job, we evaluate the applicants' knowledge, skills, and abilities for a particular job description. To build effective job descriptions that align with customer and market requirements, during annual strategic planning we identify technical and management capabilities that we must maintain or develop to support changing product line needs, training, and professional development. To align process capabilities with customer requirements, specific IPT business action plans identify human resource needs.

Besides our "play by the rules" policy (fig. 1.1-2) and the EEO officer review of selections, workforce diversity is addressed through our strategic plan item team 14 on table 2.2-1.

## **5.2 Employee education, training, development**

**5.2a(1), (2), (3) Training needs analysis** Training needs are developed and planned for through two interactive mechanisms: individual development plans (IDP's) and business action plans. That information is rolled into our annual Training Plan.

- To meet short- and long-term goals, we use the five-year IDP process. Together, employees and supervisors develop plans to meet mission-related, Center support, and professional development goals. IDP's then provide information for our annual Training Needs Survey, which our training committee uses to prioritize and budget training and ensure that we are training in accordance with our strategic plan. IDP's are updated annually.
- During annual business planning, teams identify training needs based on customer needs (2.2a(1)), adjusting plans during LIR's/PRB's and coordinating with the Training Committee as needed (1.1a(2)).
- High performance often depends on the ability to redirect training and enhance in-house capabilities quickly. Therefore, to supplement IDP's and to enhance flexibility and responsiveness, we use "just-in-time" training to meet unexpected training requirements.

**5.2a(4) Training delivery and evaluation** We apply training delivery approaches as follows:

- *Club membership.* For software training, we purchase "club" memberships for employees needing several training courses within a certain period. Employees then can choose a variety of classes for a set fee.
- *PC- or video-based self-instruction.* Self-instruction software tutorials and videos enable individuals to set their own pace and time.

- *Video-based college courses.* To facilitate and encourage the pursuit of advanced degrees, we support a video-based college program in conjunction with various universities.
- *Traditional classroom training* is used for employees pursuing degrees in a traditional setting. We provide tuition assistance to help with advanced degrees in engineering, management, etc.
- *Seminars and workshops* are well-suited to meeting professional certification requirements or focusing on specific subject matter.
- *On-the-job training* is used for learning processes specific to Corps of Engineers operations and sharing process improvements.
- *Developmental assignments* are temporary duty assignments whereby employees build skills and prepare for greater responsibilities. For FY99, we implemented 52 developmental assignments in public relations, contracting, engineering, management, EEO counseling, and admin support. We evaluate training for appropriateness and effectiveness in the following ways:
  - *On-the-spot evaluation.* After training is finished, employees complete DD Form 1556 where different aspects of the training, such as instructors, materials, appropriateness, etc., are rated. Employees provide comments on their reaction to course strengths and weaknesses.
  - *Behavior changes.* Managers can correlate changes in behavior with 360, climate survey, and team performance measurement trends to evaluate not only the effectiveness of training but the need for training.
  - *Training results.* We also judge training effectiveness through professional certification and registration or degrees conferred by the authorizing institute, since they are earned by meeting standards or passing examinations.
  - *Feedback improvement.* We are negotiating an MOA with our Army personnel supplier to build a database of evaluations conducted six months after course completion to assess training value in relation to performance improvement.

**5.2a(5) Developmental training needs** Table 5.2-3 shows standard key training for maintaining mission-related and Center support areas. We supplement that with professional development. Our IDP process explained in 5.2a (1), (2), (3) is the main mechanism for coordinating individual professional development with corporate needs.

Table 5.2-3. Maintaining standard key training

| Training                     | Audience                           | Length  | Attendance             |
|------------------------------|------------------------------------|---------|------------------------|
| L.E.A.D.                     | Supervisors                        | 40 hrs. | All new                |
| OLE                          | Supervisors                        | 40 hrs. | All new                |
| PME                          | Supervisors                        | 40 hrs. | All new                |
| Basic Fiscal Law             | Funds managers                     | 40 hrs. | All new                |
| Fiscal Law refresher         | Funds managers                     | 8 hrs.  | All                    |
| Annual Ethics                | Funds managers                     | 4 hrs.  | All                    |
| Sexual Harassment            | Center-wide                        | 1 hrs.  | All                    |
| Annual EEO refresher         | Supervisors                        | 2 hrs.  | All                    |
| Biannual EEO                 | Center-wide                        | 2 hrs.  | All                    |
| HAZWOPER Safety              | Environmental site investigators   | 40 hrs. | All safety specialists |
| Annual HAZWOPER refresher    | Same                               | 8 hrs.  | All safety specialists |
| Site safety                  | OE/construction site investigators | Varies  | All required           |
| Security                     | Center-wide                        | 2 hrs.  | All                    |
| New employee orientation     | New employees                      | 8 hrs.  | All                    |
| Annual OE standdown          | OE IPT members                     | 8 hrs.  | All                    |
| Annual Contracting standdown | CT and related staff               | 8 hrs.  | All                    |
| Commercial items training    | Credit card holders                | 8 hrs.  | All                    |
| PROMIS                       | PM's                               | 40 hrs. | All                    |
| Medical facilities NFPA      | UPH team                           | 40 hrs. | All                    |

**5.2a(6) Performance excellence through training** To reinforce progress in our quality initiatives, we provided the following quality training:

| Training                       | Audience       | Length  | Attendance |
|--------------------------------|----------------|---------|------------|
| APIC (Baldrige) for executives | Senior leaders | 8 hrs.  | All        |
| Performance measurements       | IPT's          | 32 hrs. | 80         |
| ISO 9000 lead auditor training | IPT members    | 40 hrs. | 30         |
| Performance-based contracting  | IPT members    | 40 hrs. | 55         |

On a continual basis, our in-house quality assessment team provides training to employees on quality control methods and standards. Quality audits are used to monitor design processes. We measure the overall effectiveness of our Training Plan by increased productivity (figs. 7.2-1, -3, -4, -6, -7a, -7b) and higher customer satisfaction scores (figs. 7.1-1, -2).

#### **5.2a(7) On-the-job skills reinforcement**

- Our *Leadership Development Program (LDP)*, established in 1996, helps employees at all grade levels reach their leadership potential. Participation is voluntary; progression is self-

paced and is facilitated by mentors. Phase I of the two-phase program requires 124 hours of self-study and 76 hours of formal training. Phase II offers college-level courses in leadership.

- *Administrative Support Group (ASG)*. Chartered in 1993, ASG offers a forum whereby 90 employees in non-career program job series can (1) identify required skills and abilities, (2) select training and developmental activities, (3) plan career development, (4) monitor development, (5) determine competency levels, and (6) strengthen skills. Under the ASG Certification Program, employees develop skills and pursue career goals through three certification levels (fig. 7-3.12).

- *Knowledge sharing*. An intranet website posts standard operating procedures (SOP's) on branch-level tasks. SOP's are especially helpful for engineer trainees and new employees. We also have a corporate-level websites for sharing information on corporate policies such as summer employment, customer satisfaction, gap analysis, outreach programs, and quality control. To share knowledge across functions and between teams, we use internal seminars held by employees, our command bulletin, PRB best practices, and e-mail.

### **5.3 Employee Well-Being and Satisfaction**

#### **5.3a Work environment**

- *Safety focus*. Our safety record is among the industry's best (figs. 7.3-11, 7.4-14), a record achieved through the preventative procedures in table 5.3-1.

Table 5.3-1. Maintaining high safety standards

| Method                 | Description   |
|------------------------|---|
| Field guidance         | Our own safety guidance tailors Corps and Army regulations to our unique requirements. Guidance distributed to all field agents |
| Work plan approval     | All work plans require in-house review and approval before site work can begin.   |
| Site work surveillance | Certified safety specialists provide on-site QA to enforce adherence to our safety guidance and work plan procedures.           |
| Safety alerts          | Any safety problem or accident occurring at one site is immediately reported to other sites to prevent further mishaps          |
| In-house guidance      | Safety awareness bulletins on accident and injury prevention are distributed via e-mail and videos.                             |
| Detection              | Safety Officer annual safety surveys of our work areas and field sites for follow up and compliance.                            |

- *Flexible work conditions*. Through flextime, employees develop flexible work schedules. Through our credit hour program, employees may

work up to one hour extra per day and use the hours at a later date. Through flexiplace employees may work at alternate duty stations.

- **First-aid training.** We contract with the American Red Cross to train key people in cardiac-pulmonary resuscitation and other first aid.
- **Ergonomics.** Before moving to our new building, we conducted a “chair and cubicle fair” where employees could ergonomically test the systems furniture configuration best suited to their needs.
- **Air-quality surveys.** Because of our indoor air-quality survey, we retrofitted our HVAC system.
- **Wellness.** Through our Health Augmentation Program, employees may use up to 3 hours of duty time per week for 26 weeks to participate in an approved fitness program in our LIFE Center.

### 5.3b Employee Support climate

#### 5.3b(1) Enhancement benefits, policies, services

Table 5.3-2 shows our main support services for morale, well being, and assistance.

Table 5.3-2 Employee support services

| Service   | Activity/Scope  |
|---|---|
| Wellness  | LIFE Center, health screenings, exercise physiologist onsite, weight control programs, nutrition classes, motivational videos and speakers, exercise programs |
| Diversity Emphasis                                    | Black and Women’s History Month, Take Our Sons/Daughters to Work Day  |
| Career Enhancement and Professional Growth            | LDP, Emerging Leaders Program, video-based college courses, ASG, developmental assignments, tuition assistance, IDP.  |
| Community Services and Recreation/Cultural Activities | HNC Activities Association, recreation leagues, discount tickets to community events, onsite book fairs, arts and crafts fair, blood donation leave           |
| Employee Assistance                                   | Legal, drug/alcohol abuse, emotional, marital counseling.   |
| Leave donation program                                | Our employees donate annual leave so that co-workers who become seriously ill do not have to take leave without pay.  |
| Safety Assurance                                      | Air-quality surveys, safety surveys, weather alert/drills, first-aid stations   |

**5.3b(2) Diversity climate** Besides our Special Emphasis programs and our annual EEO training, we have two unique ways for promoting diversity:

- To increase minority engineers in our hiring pool, we went to our local schools to “grow” our own future workforce. Through strategic planning (table 2.2-1, team 14), we target the hiring of minority high school summer and co-op students and partner with local schools to support technical learning, thereby encouraging minorities to enter technical careers.
- One of our annual honorary awards is our EEO

award recognizing those who excel in supporting this area.

**5.3c Employee satisfaction** We use climate surveys to assess our work environment (figs. 7.3-1, -2). Survey results are analyzed to understand the internal level of employee satisfaction. As a result, major changes were instituted in three of our four lowest rated organizations. In one, a new chief was installed. In another, employees were collocated with the teams they were supporting. In another, one of the internal teams was incorporated into another directorate. The result is that scores are up in all four organizations (fig. 7.3-2).

Other methods of addressing employee satisfaction and dissatisfaction include grievances and EEO complaints (fig. 7.3-6). Also, our Commander gains informal insight into employees’ perceptions through his open door policy and town halls. We also monitor sick leave usage and counsel those employees who overuse leave.

Through our climate survey, “360” evaluations, and the internal customer survey, we can determine employee satisfaction for specific factors. We also measure factors, such as productivity, grievances, EEO complaints, and individual and team accomplishments to evaluate satisfaction. We implement action through analysis and review. We analyze the current year’s survey results to determine employee satisfaction with previous years’ initiatives.

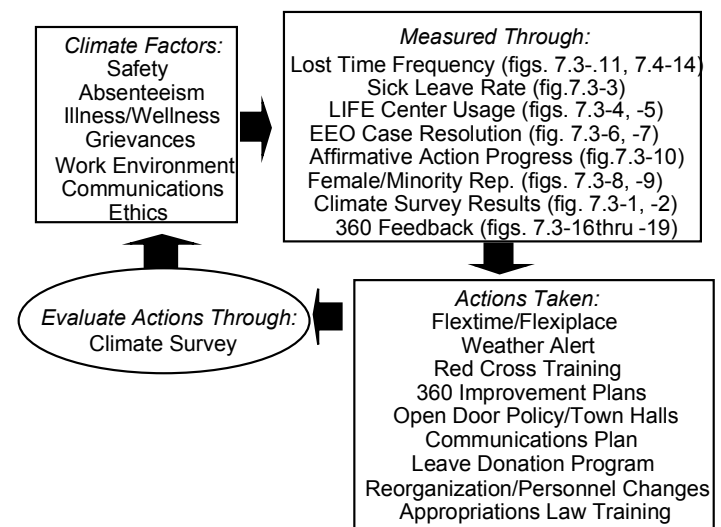


Figure 5.3-1. Determining employee satisfaction through our climate survey



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## ***6.0 Process Management***

## 6.1 Management of Product and Service Processes

### 6.1a Design process

**6.1a(1) Product/delivery processes and design** Fig. 6.1-1 shows our work design process. First we define customer requirements in MOA's or PMP's. MOA's are used to define roles and responsibilities of each agency (HNC, customers, partners, suppliers, etc.) for projects. PMP's are formal plans required for all projects over \$100K. Based on the customer requirements outlined in these plans, project managers (PM's) define in their business action plans (2.2) the resources required to support new or expanded work. The MCG reviews the needed resources; then an integrated process team (IPT) (5.1a(1)) of cross-functional personnel from our key processes and support processes is formed to take work from design to execution. IPT's define the following aspects of our products and services and their delivery through the PMP: resource plan, outline of needed key and support processes, acquisition plan, baseline schedule, SOW based on customer requirements, process specifications, technology requirements, performance measures, configuration (change) management plan, program/data quality control plans (PQCP's/DQCP's).

If no design changes are required, IPT's manage the processes to produce and deliver the product or service.

**6.1a(2) Incorporating changing requirements** We identify new or changing requirements through the approaches in item 3.1 and tables 3.1-2 and -4. We include

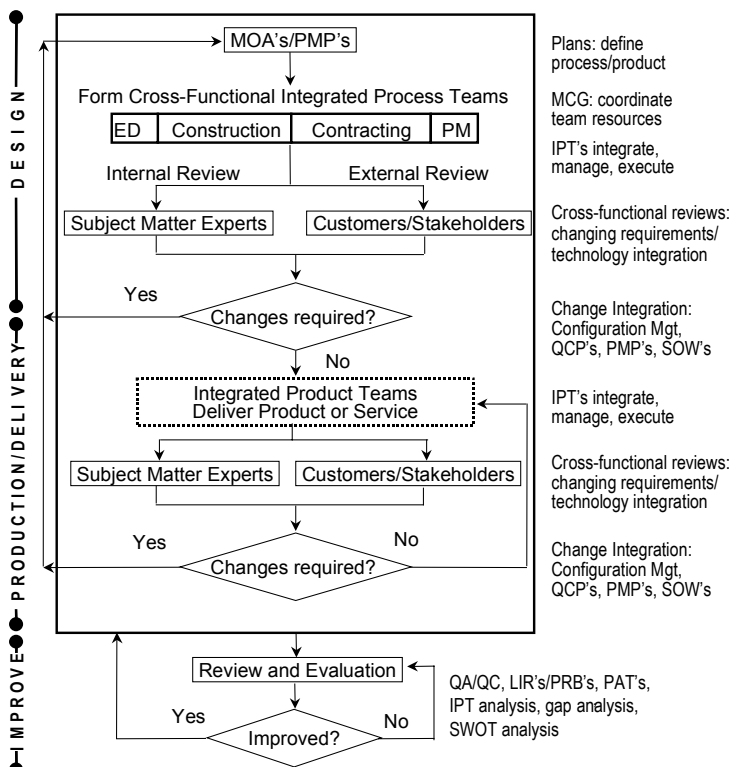


Figure 6.1-1. Product/Service Process Model

requirements in formal design and production reviews as shown in figs. 3.1-1 and 6.1-1. We also use cross-functional subject matter expert reviews to identify changing specifications and/or regulatory requirements. In-progress changes are integrated through formal configuration management procedures and IPT's on complex projects. When formal configuration management is not appropriate, PMP's, QC plans, and SOW's provide the means to actively modify the design/delivery process to incorporate changes during project design execution. Frequent IPT meetings and regular communication with the customer provide the rapid response and flexibility required by smaller and short-term projects.

**6.1a(3) Incorporation of new technology** Many products and services are unique engineering systems requiring a first-time approach or technology introduced in evolving regulatory environments. To stay innovative and keep up with changes, we use four main approaches:

- **Market knowledge.** We remain current with ever-changing and new technologies by participating in DOD and industry forums, working groups, and regulatory committees as explained in 3.1a(2).

- **Project startup.** When possible, we introduce new technologies at the front end of the project. The most efficient way to do this is by evaluating new technologies and/or approaches during acquisition planning to minimize changes during execution. Suppliers, then, propose and/or demonstrate new technologies and/or approaches as part of their evaluation. Recent acquisition plans from OE and OMEP Programs were recognized by Corps HQ for their innovative approaches and submitted to Corps districts as models for other acquisitions.

- **Technology team.** For continual technology advancement, we use an innovative technology team that continually reviews and evaluates new technologies and their applicability to our work. One such team established a demonstration test site to evaluate applicable technologies for simulating OE contamination. Vendors may use that test site to improve and demonstrate their innovations.

- **During execution.** New or changing technologies are also integrated into our products/processes at later stages through formal configuration management control procedures and modifications to the design/delivery process through PQCP's, DQCP's, and SOW's.

**6.1a(4),(5) Addressing process efficiency/effectiveness factors and performance requirements** As explained in 5.1a(1), we integrate all elements of product/service design through cross-functional IPT's as shown in fig. 6.1-3. To ensure compliance with technical and regulatory requirements and consistency between similar

products/services, subject matter experts review the design, e.g., an HNC board reviews all OE engineering evaluation recommendations from various IPT's for consistency from team to team before external review.

To further assist IPT's, we perform in-process reviews (IPR's) of all QC plans, which document initial customer requirements defined by MOA's/PMP's and revised criteria and rationale for change. We also use internal quality assurance (QA) audits to evaluate and improve our design processes. We develop QC plans for all projects. As those documents are audited, results are fed back into the QA process to promote transfer of learning and reduce cycle time. To enhance learning and technology transfer, audit team members are selected from other product teams. Audit information is shared through IPT meetings, LIR's/PRB's, and websites.

**6.1a(6) Coordination and testing** We coordinate and test our design and production/delivery processes through internal reviews by subject matter experts and external reviews by customers and stakeholders as shown in fig. 6.1-1. When appropriate, we use small-scale pilot tests before full product application. On our Chem Demil Program, a pilot plant was built at program start. On our BMD Program, we will also design and construct test facilities prior to full-scale production.

#### **6.1b Production/delivery processes**

**6.1b(1), (2), (3) Key processes, requirements, management, and operations** We deliver a diverse family of technical products and services through the Project Management Business Process (PMBP). Methodology. Our four key processes are:

- Engineering and technical services provide product line design, technical support, and QA.
- Construction management provides construction management, field QA, and change management.
- Contract management provides pre- and post-award acquisition services.
- Program and project management (P&PM) integrates key and support processes, ensuring that the final product meets the customer's needs.

Our PMBP in fig. 6.1-3 identifies product lines, key process requirements, controls for ensuring that requirements are met, and measures for controlling our processes. At 1.0, corporate process controls are the highest level controls, ensuring that process systems are effective and efficient. At 2.0, product lines are developed to align customer requirements with specific processes. At 3.0, project controls are used by IPT's to ensure that processes meet specific customer requirements. At 4.0 and 5.0, processes are integrated to support product lines.

**6.1b(2) Key process operations performance** Process management begins at strategic planning where KSF strategies are developed. Teams then develop business plans, including operational strategies and measures supporting corporate strategies in table 2.2-1. Daily operations are monitored through the measures in fig. 6.1-3 at team meetings and LIR's. Aggregated measures of process performance are reviewed by leaders during Business Meetings and PRB's (1.1b(1)).

**6.1b(3) Process performance measures** Our key performance measures and the controls used to manage and improve our processes are identified in fig. 6.1-3. Real-time customer input is sought as described in table 3.1-2 and fig. 3.1-1 and reported in fig. 7.1-11.

**6.1b(4) Improving and sharing lessons learned** Mechanisms for improving our processes are as follows:

- *Integrated Process Teams.* Our IPT's are cross-functional teams integrating and executing our processes daily, and are, therefore, a key improvement source. Our Energy and Medical Teams, for example, developed a streamlined process for O&M repair and renewal (figs. 7.5-1 thru -4), which is deployed in four ways: (1) We partner with districts to provide O&M repairs for their customers through our established contracts. (2) Districts are adopting our process as their own business practice. (3) We provide service to the Army and Air Force Medical customer. (4) Aspects of this process and its concepts have been adapted and adopted by other teams, such as OE.
- *QA Audits.* Through our quality audit process, we develop QCP's for all projects. Internal ISO 9000-trained teams audit those projects to streamline processes, evaluate quality, prevent deficiencies, and create a mechanism for continuous improvement (fig. 6.1-2).

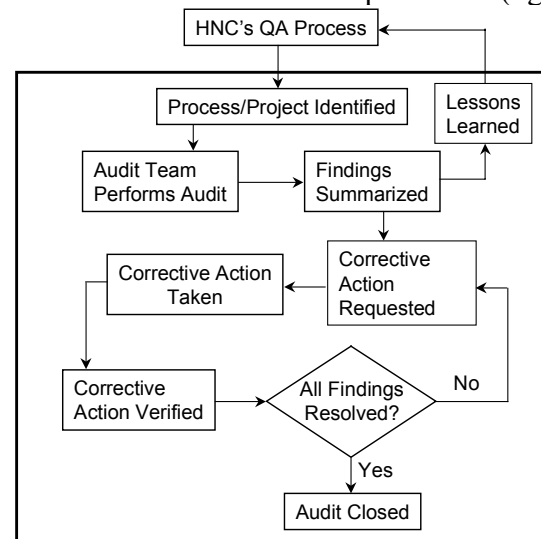
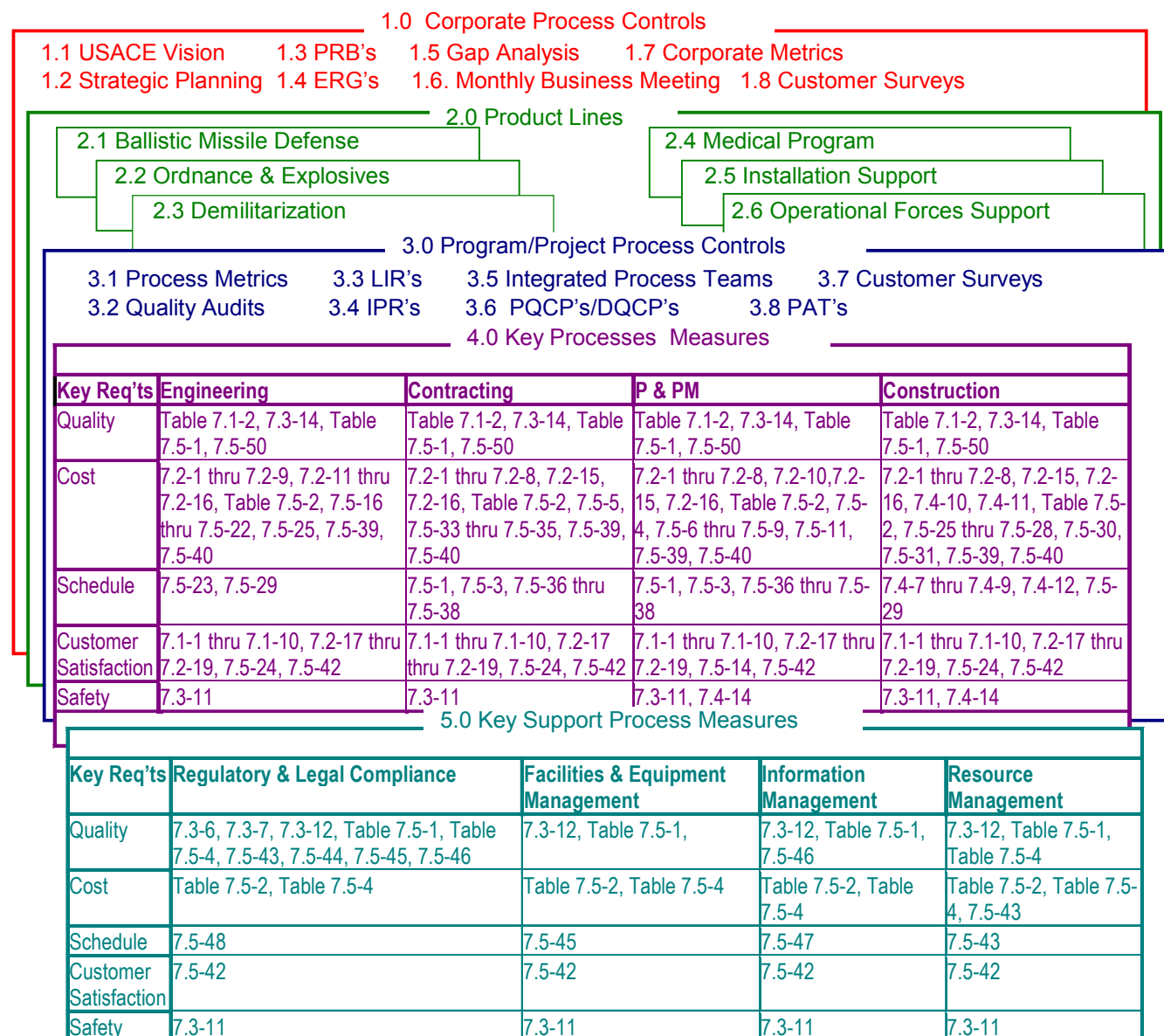


Figure 6.1-2. Quality Audit Process



**6.1-3. Project Management Business Process (PMBP) Methodology for designing, integrating, and managing our processes to create products and services that meet specific customer requirements**

- **Other Improvement Venues** We also make improvements through process action teams, external quality management reviews conducted by our partners and suppliers, value engineering studies (fig. 7.5-25), and our gap analysis (fig. 1.1-3).
- **Sharing Lessons** Our structure as explained in 5.1a(1) facilitates information sharing. Therefore, lessons from improvement initiatives are shared across the organization through teams: (1) IPT's brief lessons at PRB's. (2) Lessons are also posted the intranet. (3) Because IPT's are cross-functional, employees bring best practices and lessons from IPT's to their functional units for sharing elsewhere. Paragraphs 4.2a(2),(3) and fig. 4.2-1 explain team sharing from the perspective of information analysis links.

**6.2 Management of Key Support Processes**

**6.2a(1) Description of key support processes** Table 6.2-1 lists our key support processes and their basic elements. Fig. 6.1-3 shows how they are integrated to support product line production.

**6.2a(2), (3), (4) Key support process requirements, design, operations** Key requirements and performance measures for support processes are shown in fig. 6.1-3. Key support processes are designed through requirements in MOA's, PMP's, and internal agreements as shown in figure 6.2-1. In that way, support organizations (1) identify customer requirements, (2) create measurement plans with internal customers, (3) establish a baseline survey, (4) develop plans of action for deficiencies. Changes are



integrated into the design as requirements change. Support processes are monitored and evaluated through the measures shown in fig. 6.1-3.

**6.2a(5) Improvement and sharing lessons learned** In May 1997, we implemented our first internal customer satisfaction survey (fig. 7.5-42) where employees rate support processes on quality, responsiveness, teamwork, performance, and cost. The ratings, plus feedback from written comments, become a source of support service improvement. Support processes are also evaluated and improved through PAT's, our gap analysis (fig. 1.1-3), and work team analysis. Support process lessons learned and best practices can be shared at PRB's and Business Meetings.

### 6.3 Supplier and partnering processes

#### 6.3a(1) Key suppliers/partners & products/services

Table 1 in the Overview lists our major suppliers and partners by product line. Primarily, suppliers in

Table 6.2-1. Key support processes and functions

| Key Support Process                     | Process Elements               | Principal Function   |
|---|--------------------------------|--|
| Regulatory & Legal Compliance           | OC, AO, SO, SL, RM-M, EEO, PAO | Ensure that we play by the rules and protect public safety.        |
| Facilities & Equipment Management       | LM Directorate                 | Ensure smooth day-to-day operation of facilities.                  |
| Communications & Information Management | IM Directorate                 | Ensure smooth day-to-day operation of automated systems.           |
| Resource Management                     | RM Directorate                 | Ensure fiscal integrity. Calculate accurate manpower requirements. |

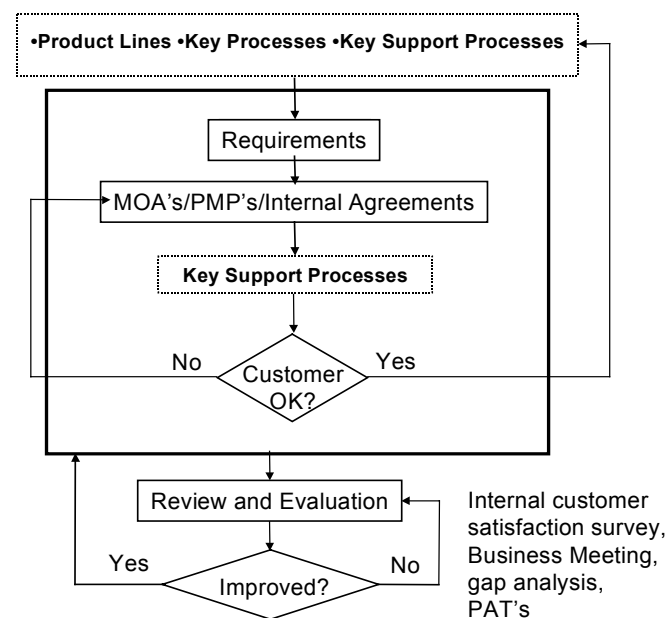


Figure 6.2-1. Key support process design and operations

provide A-E and construction services. Paragraph 9 in the Overview explains our supplier strategy and our Corps partnerships. Our process for managing supplier and partnering relationships is shown in fig. 6.3-1 and explained below in (1), (2), and (3).

#### 6.3a(2) Supplier/partner management

• *Supplier process design, selection, and key requirements.* First, we develop an acquisition plan based on customer needs and our key process capabilities, as shown in fig. 6.3-1. That plan outlines the acquisition process, including contract type. Key supplier requirements are then defined in the Commerce Business Daily (CBD) and the statement of work (SOW). The supplier is selected through cost and/or technical competition, with supplier capabilities determined by a contract review board (CRB) and a technical evaluation board (TEB). Contracting Officers use "Best Value" contracting practices to evaluate cost, technical, and past performance when selecting suppliers.

• *Partnering process design, partner selection, and key requirements.* Partners may be customers, contractors, Corps agencies, stakeholders, or other government organizations that are key members of the mission execution team. For all major projects, such as Chem Demil and BMD, we use the Corps of Engineers' formal partnering process per the Chief of Engineers policy memorandum #5 and the IWR PAM-91-ADR-P-4, "Partnering." The Corps process is through facilitated meetings that lead to a charter of mutually beneficial goals signed by the principals, i.e., the customer, suppliers, stakeholders, and the Corps. That partnering process has been recognized as the model for the Government. For smaller projects we use other partnering methods. For example, our Medical team uses quarterly IPR's, and our ESPC team has formal MOA's with installations and Corps districts. As shown in fig. 6.3-1, Corps partnerships are designed through MOA's identifying key requirements.

**6.3a(3) Supplier/partner management measures and feedback systems** Each contract SOW communicates key quality, cost, schedule, and safety requirements. MOA's and post-award conferences ensure that all participants—Huntsville Center, suppliers, partners, and the customer—understand their responsibilities in meeting expectations. Through our facilitation, customers and suppliers interact regularly. When appropriate, we use full-time liaisons, such as in Aberdeen with our biggest customer, Chem Demil.

Performance feedback is given to each participant during work-in-progress evaluations

conducted via design reviews, QA reports, and IPR's. We also use our quality audits (fig. 6.1-3) to monitor supplier quality, cost, schedule, and regulation compliance. Other evaluation mechanisms include award fee boards (fig. 7.4-66), earned value analysis (figs. 7.4-7, -8, -9), cost and time growth analysis (figs. 7.4-10, -11, -12), and safety surveys (figs. 7.4-14). Performance measures are included in contracts and are evaluated at certain stages during contract execution.

Final supplier performance evaluations and feedback are given at project completion. The performance evaluations are formally documented in databases listed in fig. 4.1-2. Results of those supplier evaluations are reported in figs. 7.4-3, -5, and -6. (There will be no CCASS evaluations until construction for Chem Demil is completed.) Contracts under \$100K are evaluated through our Simplified Acquisition evaluation system (fig. 7.4-2).

#### 6.3a(4) Minimizing inspections, tests, and audits

Through Performance Based Contracting (PBC), we reduce the level of effort required for oversight of our suppliers. Without PBC, supplier management requires intense oversight. Under the old approach, we were also responsible for costs incurred because of rework. With PBC, the supplier is responsible for rework required to meet their performance metrics. By incorporating supplier performance metrics directly into contracts, we also place responsibility on the supplier for collecting the data required to evaluate performance.

#### 6.3a(5) Supplier/partner improvement incentives

With the award fee process, we pay the contractor a percent of the total award fee based on supplier performance (fig. 7.4-16). The fee is the only profit the contractor makes. Other incentives include letters/certificates of commendation; excellent ratings; write-ups in HNC publications; project success stories at forums and seminars; posting excellent ratings on our home page; and additional work. Incentives may also be given for special acts or to recognize a supplier's achievement within specific areas, such as a perfect safety record or the application of innovative technologies and/or approaches.

#### 6.3a(6) Improving and sharing lessons learned

Through our gap analysis (fig. 1.1-3), we implemented SSCASS and created and implemented our Simplified Acquisition rating system to better manage and evaluate external supplier performance (figs. 7.4-2 and -3). We have also initiated PBC

training for our employees based on improved supplier performance on current contracts utilizing PBC. In addition to team sharing, we share lessons learned and promote technology transfer through standdowns (1.1a(1)), workshops, and partnering. We also participate in industry forums, such as the Joint Advance Planning Briefing for Industry in July 1999.

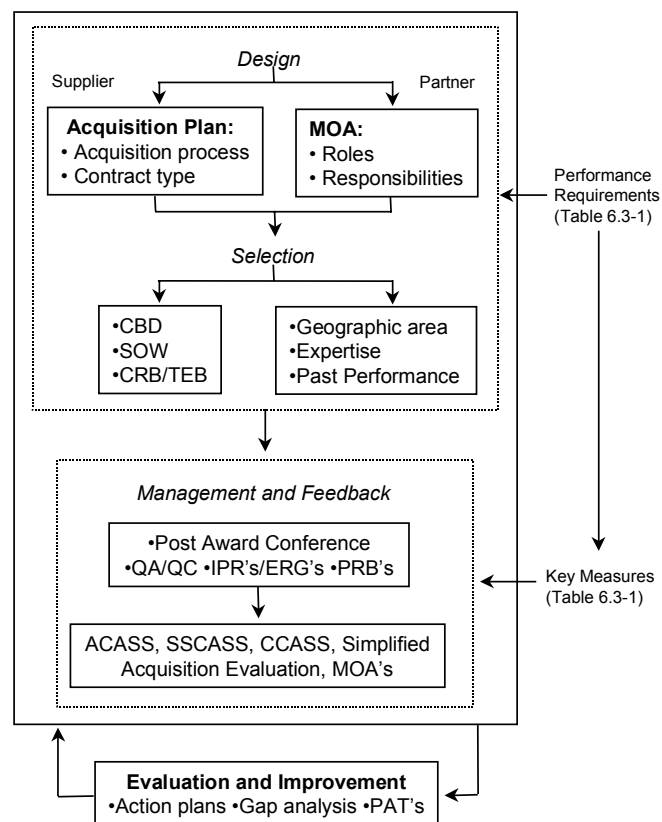


Figure 6.3-1. Supplier and partner management

Table 6.3-1. Supplier and partner performance measures

| Key Requirements      | Chart References  |
|-----------------------|---|
| Quality               | 7.4-2 thru -6, 7.4-16   |
| Cost                  | 7.4-1, 7.4-7 thru -11, 7.4-13, 7.5-2, -4, table 2 in Overview |
| Schedule              | 7.4-7 thru 7.4-9, 7.4-12, 7.4-15                              |
| Safety                | 7.4-14  |
| Customer Satisfaction | 7.4-4   |

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## ***7.0 Business Results***



### 7.1a Customer Focused Results

#### 7.1a(1) Customer satisfaction and comparisons

Our primary means of evaluating external customer satisfaction is our annual external customer survey below. Our customers rated our efforts on a scale of 1 (low) to 5 (high). Results are in figs. 7.1-1 through -10.

Table 7.1-1. External Customer Survey Questions

|   |
|---|
| How Well Huntsville Center.   |
| 1. Seeks your requirements, priorities, and expectations and incorporates them into our service |
| 2. Manages your projects effectively  |
| 3. Treats you as an important member of the team  |
| 4. Solicits, listens to, and resolves your concerns   |
| 5. Provides timely services   |
| 6. Delivers quality products and services   |
| 7. Delivers products and services at reasonable cost  |
| 8. Displays flexibility in responding to your needs   |
| 9. Keeps you informed   |
| Rate Huntsville Center's...   |
| 10. Project management performance  |
| 11. Funds management and cost accounting performance  |
| 12. Architect-engineer contracts performance  |
| 13. Engineering design quality performance  |
| Rate the following...   |
| 14. Huntsville Center would be your choice for future project/services                          |
| 15. Your overall level of customer satisfaction   |

We asked five questions in FY99:

|  |       | Better  | Same  | Worse          | NA    |       |
|--|-------|---------|-------|----------------|-------|-------|
| 16. How do we compare to others who have provided you similar products and services?                         |       | 50%     | 24%   | 3%             | 21%   |       |
|  |       | Quality | Cost  | Responsiveness | Other |       |
| 17. Why did you select Huntsville Center?  | FY 98 | 20.1%   | 10.3% | 29.4%          | 40.2% |       |
|  | FY 99 | 24.0%   | 13.0% | 28.0%          | 35.0% |       |
|  |       |         | More  | Same           | Less  | None  |
| 18. Will the services you require of us be more, the same, or less in the next 5 years?                      | FY 98 | 27.3%   | 42.4% | 26.6%          | 0.0%  |       |
|  | FY 99 | 24.1%   | 46.7% | 27.2%          | 1.5%  |       |
|  |       |         |       | Yes            | No    |       |
| 19. Based on your experience with Huntsville Center, would you recommend us to other organizations/agencies? |       |         |       | FY 98          | 90.6% | 9.4%  |
|  |       |         |       | FY 99          | 95.0% | 5.0%  |
|  |       |         |       | Yes            | No    |       |
| 20. Do you know of other organizations/ agencies that could benefit from our products & services?            |       |         |       | FY 98          | 39.6% | 60.4% |
|  |       |         |       | FY 99          | 34.8% | 65.2% |

As fig. 7.1-1 shows, our customer satisfaction has improved since FY95. Quality continues to be our highest rated area and cost our lowest. Nine of the fifteen items were the best in the Corps of Engineers. Ratings on five items are higher than ever before. We set survey goals by comparing individual survey questions like those shown in fig. 7.1-4 and through our customer satisfaction index (CSI) shown in fig. 7.1-5.

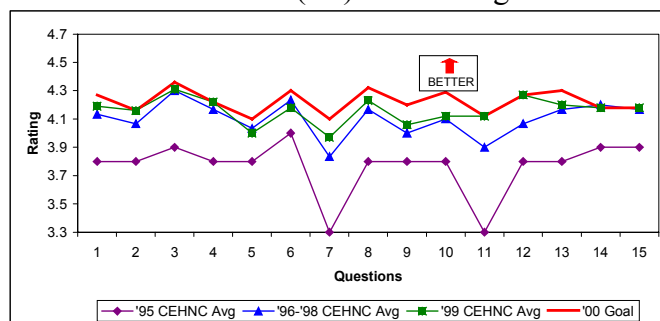


Fig. 7.1-1. External Customer Survey Trend

Fig. 7.1-2 shows satisfaction trends by key requirements: timeliness, quality, cost, overall satisfaction.

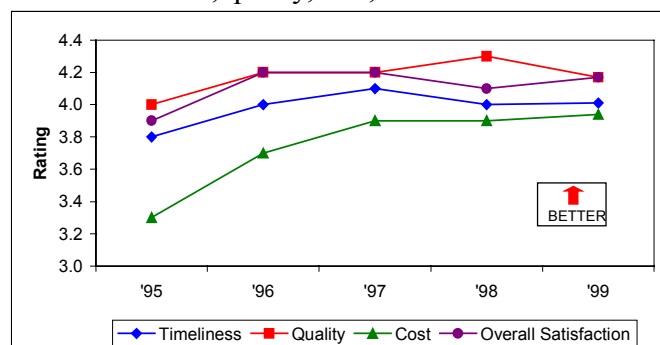


Fig. 7.1-2. Trend By Key Requirements

Fig. 7.1-3 shows external customer survey results compared to the USACE average and overall average of USACE MSC's. Also, 50% of our customers rate us better than that of our competitors (table 7.1-1, #16).

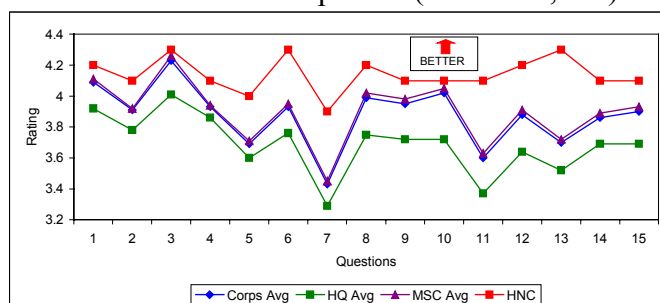


Fig. 7.1-3. Customer Satisfaction Comparison

Fig. 7.1-4 shows that we rate "best in the Corps" on our key success factors of timeliness, cost, and quality. We plot each question to set the survey goals shown in fig. 7.1-1. We strive to be the best in USACE on each question.

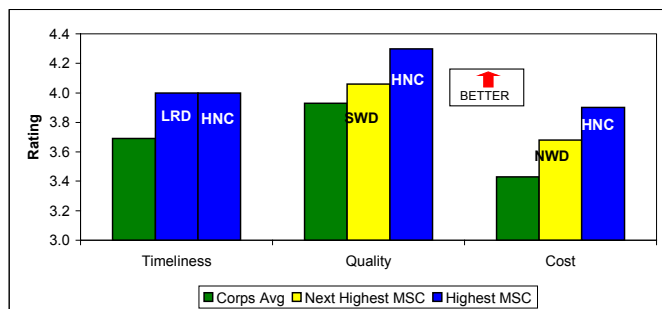


Fig. 7.1-4. HNC Rating on Key Success Factors

Fig. 7.1-5 shows our CSI compared to the average survey scores. The CSI, along with analyses like fig. 7.1-4, helps us set our goals in fig. 7.1-1. Results show that for quality and timeliness we are responding appropriately. Our goal is a cost score of 4.1 to be commensurate with the expectations of our customers.

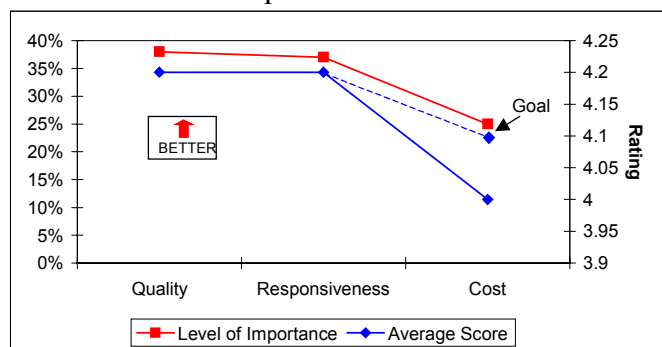


Fig. 7.1-5. Customer Survey Weighting Factors

Fig. 7.1-6 shows satisfaction results segmented by command level as described in table 3.1-1.

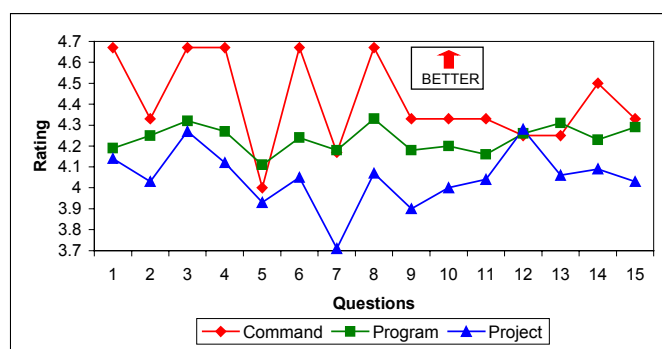


Fig. 7.1-6. External Customer Survey by Levels

Fig. 7.1-7 shows the response rate from our FY95, FY96, FY97, FY98, and FY99 surveys. Excluding the initial survey (FY95) response rate, our response rate has been steady. We update our customer list annually.

Fig. 7.1-8 shows dissatisfied responses for FY95 through FY99. Of the 140 surveys returned by our customers in FY99, 17.9% had at least one negative rating (below 3). Negative responses are given immediate attention (3.2a(3)). We use dissatisfaction data to improve our products, services, and processes.

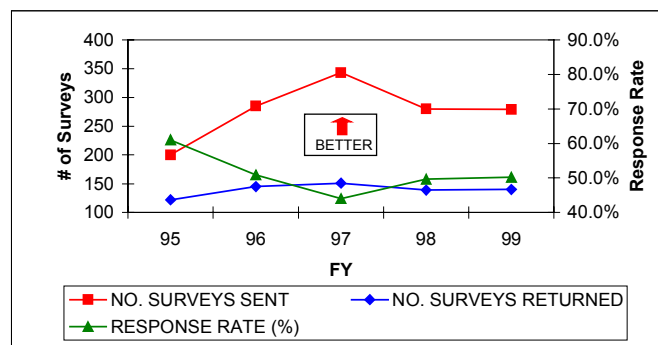


Fig. 7.1-7. External Survey Response Rate

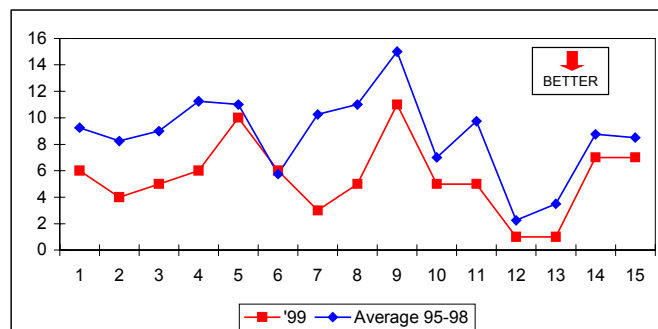


Fig. 7.1-8. HNC Dissatisfied Customer Responses

### 7.1a(2) Customer loyalty

Fig. 7.1-9 shows HNC's customer retention and new customer percentages.

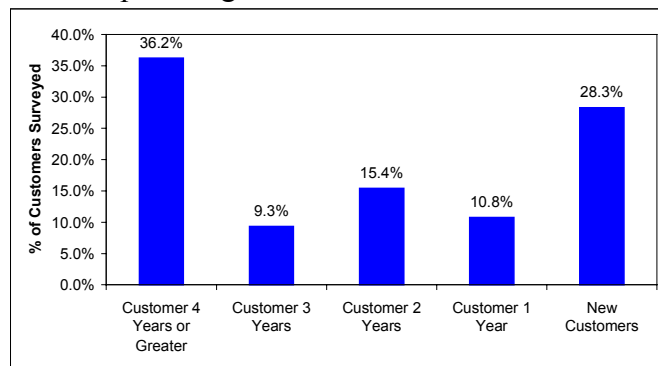


Fig. 7.1-9. Customer Retention Data

Fig. 7.1-10 shows our external customer response to whether we are their future choice for business.

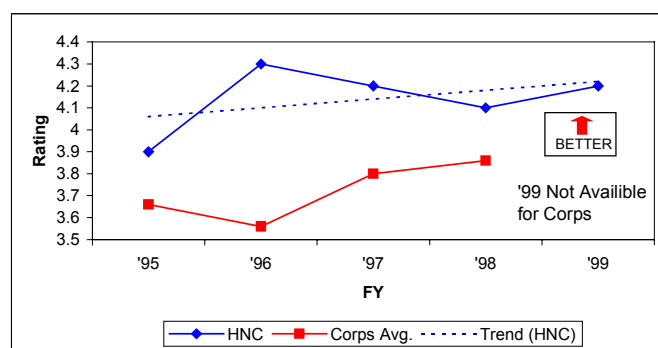


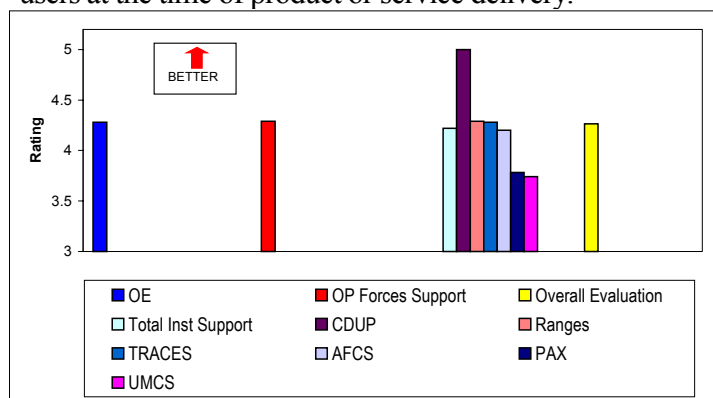
Fig. 7.1-10. Future Choice of Doing Business

**7.1a(3) Key product/service performance levels** Table 7.1-2 shows key rework data, which is under 1% for each type. This measure of our high quality correlates with customer satisfaction with quality (fig. 7.1-4).

*Table 7.1-2. Key Rework Rates*

| Type  | Total Work      | Rework      | % Rework |
|-------|-----------------|-------------|----------|
| Demil | \$1,801,846,083 | \$1,431,253 | 0.08%    |
| BMD   | \$8,000,000     | \$50,000    | 0.63%    |
| OE    | 6,743 grids     | 63 grids    | 0.94%    |

Fig. 7.1-11 shows key satisfaction results from evaluations of products or services with many end users at the time of product or service delivery.



*Fig. 7.1-11. Product/Service Performance Evaluation*

## 7.2a Financial and Market Results

### 7.2a(1) Financial performance

Responding to our customers' concerns about costs (fig. 7.1-1), we changed the way we do business in order to improve our efficiency. Methods used for controlling costs include:

- Setting and reviewing performance, establishing goals, and taking corrective action in our Business Meetings and PRB's (1.1b(1) and table 1.1-1).
- Implementing a team structure (5.1a(1)).
- Educating the work force on cost of doing business.
- Eliminating and reclassifying overhead positions and supervisory levels (fig. 7.3-15).
- Emphasizing chargeability (figs. 7.2-13, -14).
- Ensuring adequate funding early (fig. 7.2-15).
- Establishing a Contracting Directorate (CT) overhead account (fig. 7.5-33).
- Monitoring workload and manpower use (figs. 7.2-6).

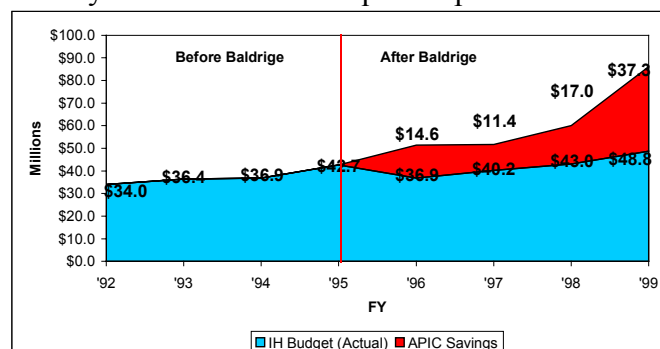
As a result, we have increased our efficiency significantly since 1995 as reported in table 7.2-1. This table is the highest level aggregate for corporate performance. These indicators track "efficiency at a glance." Figs. 7.2-1 through -16 are breakdowns of these indicators. Breakdowns are analyzed to the lowest levels and reviewed as explained in 1.1b and table 1.1-1. As explained in 4.1a(1), we use dollars as indicators for a

present and future indicator of financial health, past and future indicator of productivity, present indicator of quality, leading indicator of competitiveness, and leading indicator of customer satisfaction.

*Table 7.2-1. Aggregate of HNC Performance*

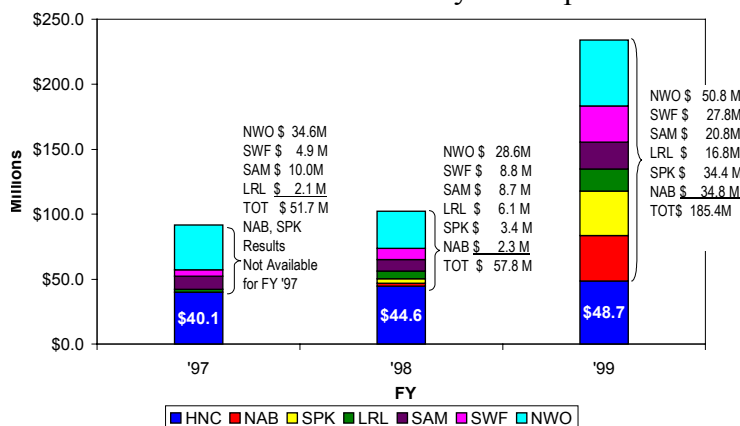
| Indicator                         | FY92-95 | B<br>A<br>L<br>D<br>R<br>I<br>G<br>E | FY96-99 | Change | FY 99<br>Only | Change |
|-----------------------------------|---------|--------------------------------------|---------|--------|---------------|--------|
| In-house % of total expenditures  | 11.3%   |                                      | 7.7%    | 32%    | 6.4%          | 43%    |
| G&A                               | 42%     |                                      | 28%     | 33%    | 24%           | 43%    |
| Engineering TLM                   | 2.8     |                                      | 2.40    | 14%    | 2.42%         | 14%    |
| Workload/FTE<br>(current dollars) | \$735K  |                                      | \$1064M | 45%    | \$1356M       | 84%    |
| TOTAL SAVNGS = \$80.3 Million     |         |                                      |         |        |               |        |

Fig. 7.2-1 shows the savings since we adopted the Baldrige criteria. Those savings total \$80.3M in in-house savings alone, which equals the training budget for a mechanized infantry or armor division. In private industry that amount would equate to profit.



*Fig. 7.2-1. Savings in In-House Operations*

Fig. 7.2-2 shows the additional in-house cost to our customers if our work were done by similar providers.



*Fig. 7.2-2. Cost Comparison to Other Corps Elements*

Fig. 7.2-3 shows expenditures against full-time equivalent (FTE) employees. While workload has grown our work force has remained fairly steady, indicating a rise in productivity.

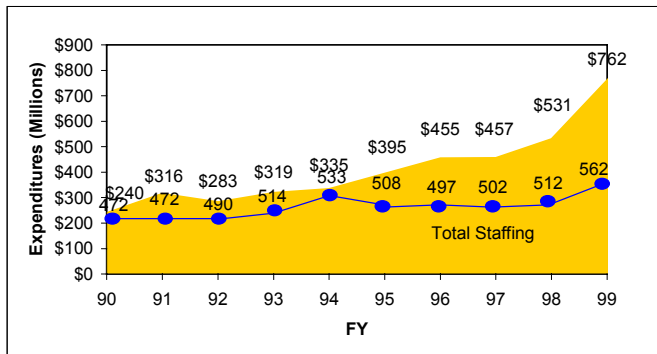


Fig. 7.2-3. Stress Chart

Fig. 7.2-4 shows that the initiatives we began in FY95 have enabled us to execute programs with a much smaller percentage of customers' money. We measure that efficiency as in-house percent of total expenditures. The slight increases in FY97 and FY98 are due to the costs of creating Chem Demil construction resident offices. Fig. 7.2-5 compares our in-house percent of total expenditures to Corps military districts.

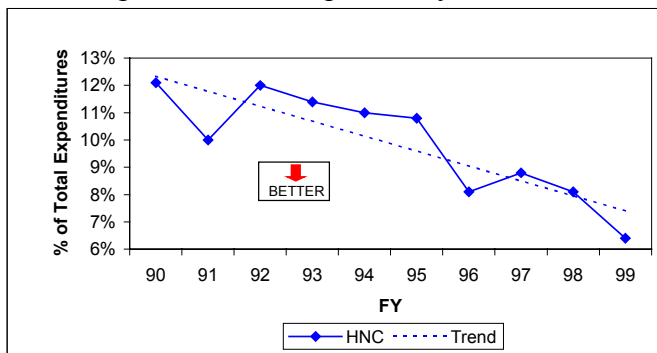


Fig. 7.2-4. In-House % of Total Expenditures

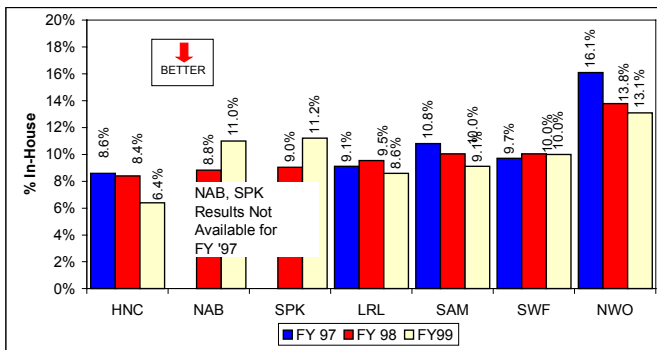


Fig. 7.2-5. In-House % of Total Expenditures Compared

Fig. 7.2-6 shows our workload increasing since 1995. Workload per FTE between FY96-99 was 41% higher than between FY92-95, indicating significant gains in efficiency. Figs. 7.2-7a and b show that we have the highest workload compared to similar providers. We attribute our increased productivity, in part, to our teaming structure and our innovative O&M process.

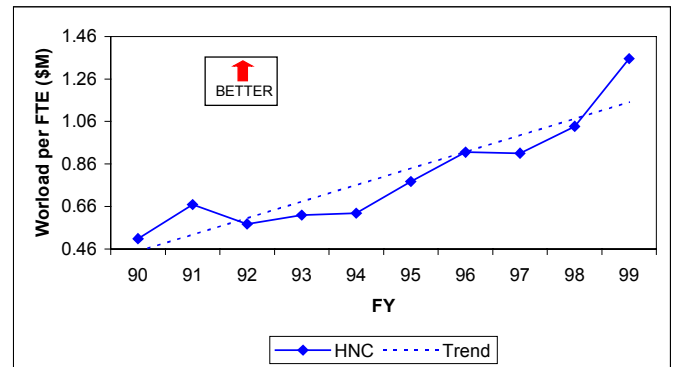


Fig. 7.2-6. Workload per FTE

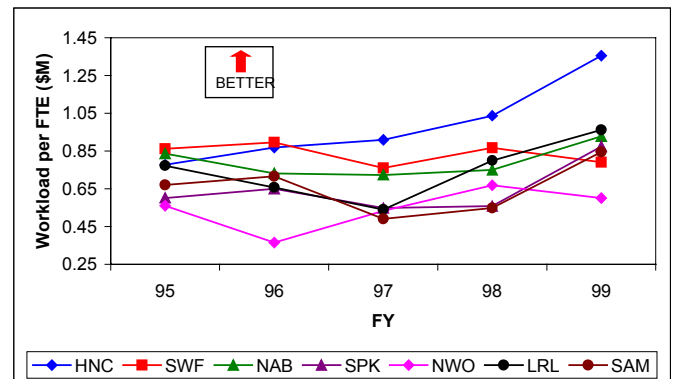


Fig. 7.2-7a. Workload per FTE Trend vs. Districts

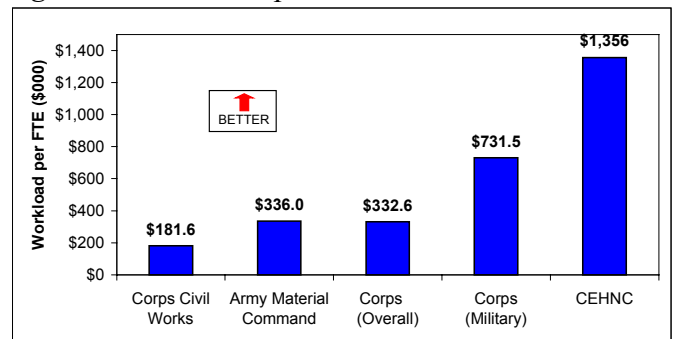


Fig. 7.2-7b. Workload per FTE vs. Similar Providers

Fig. 7.2-8 shows the downward trend in our general and administrative (G&A) overhead rates.

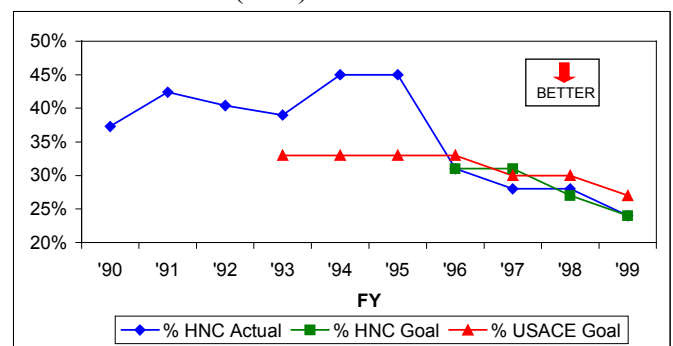


Fig. 7.2-8. HNC G&amp;A Overhead Trend

Total labor multiplier (TLM) is the indirect costs distributed to each direct labor dollar. Because TLM in-



cludes in-house labor, fringe benefits, G&A, departmental overhead, and base rate (fig. 7.2-11), it is one of our key efficiency indicators. The total hourly charge to a customer is calculated by multiplying the TLM by the basic hourly pay rate. Because TLM is an industry standard, we use it to compare our performance to similar providers. Figs. 7.2-9 and -10 show our design and P&PM TLM compared to major Corps military districts. Fig. 7.2-11 shows that since FY95 our engineering TLM dropped 17%, from 2.90 to 2.42, thus decreasing the hourly rate charged to our customers. Fig. 7.2-12 compares our design labor cost per hour compared to major design firms. Our low TLM helps us keep our hourly labor costs down.

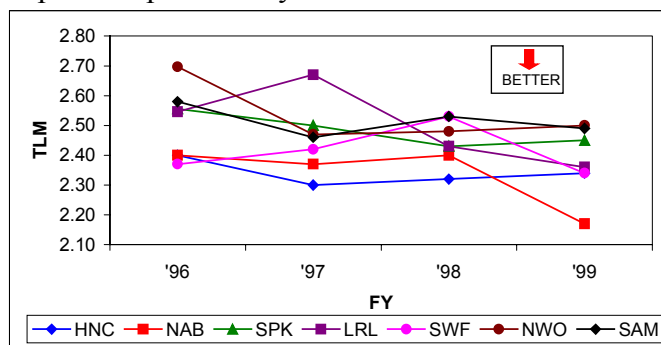


Fig. 7.2-9. HNC Design TLM vs. Districts

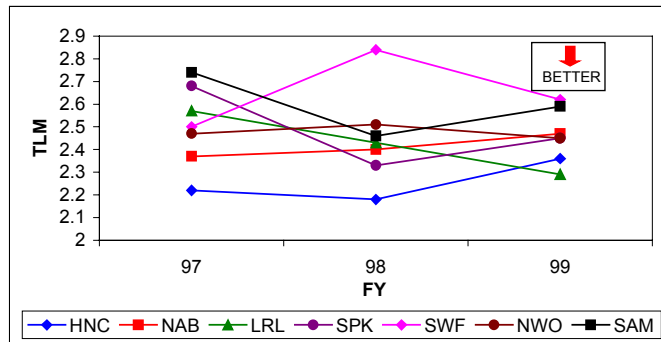


Fig. 7.2-10. HNC P&amp;PM TLM vs. Districts

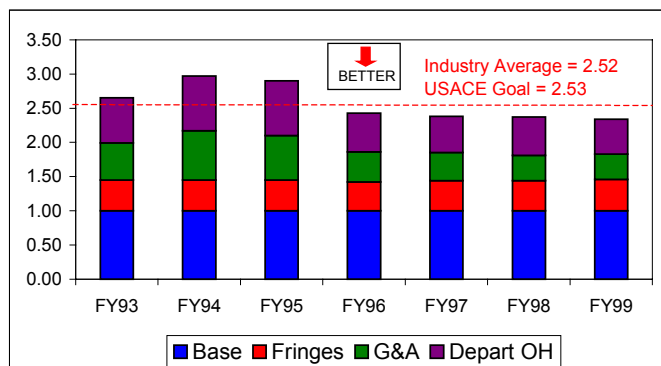


Fig. 7.2-11. HNC Engineering TLM vs. Industry

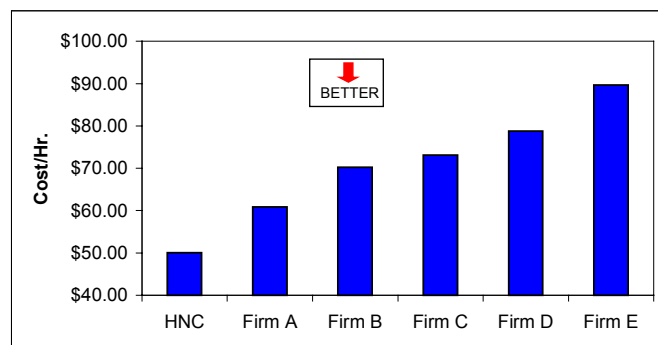


Fig. 7.2-12. Design Labor Cost Per Hour Compared  
Design chargeability, the rate at which we charge directly to project accounts, is linked to controlling overhead rates. Fig. 7.2-13 shows that since FY95, our rate has been consistently higher than the industry average. Fig. 7.2-13 shows that our chargeability improved from 58% in FY94 to 67% in FY99. Fig. 7.2-14 shows that we have the highest chargeability rate of key Corps military districts. We attribute our improved rates to our emphasis on obtaining project funds early in the fiscal year, thereby reducing charges to overhead and increasing direct charges by earlier work start dates as shown in fig. 7.2-15. By receiving our funds early, we can distribute work evenly across the fiscal year. That is one way we increase our efficiency.

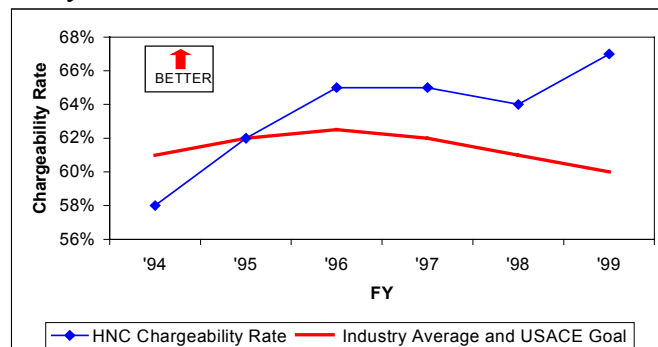


Fig. 7.2-13. Design Chargeability Rate

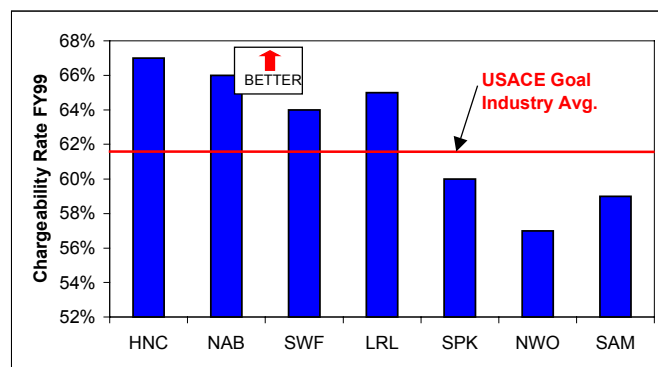


Fig. 7.2-14. Design Chargeability Comparison



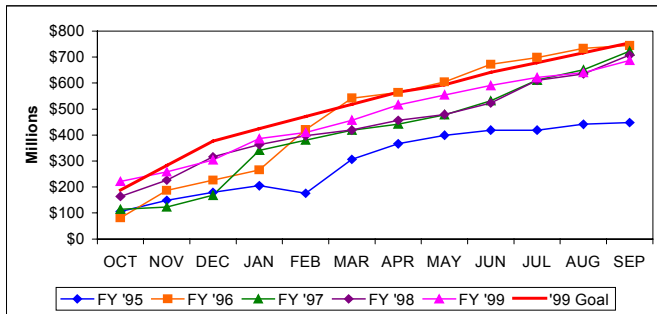


Fig. 7.2-15. Funds Received (Cumulative)

Fig. 7.2-16 shows our month-by-month expenditures since FY94. The smoother the slope, the more even the work distribution, a factor that adds to our efficiency and high chargeability.

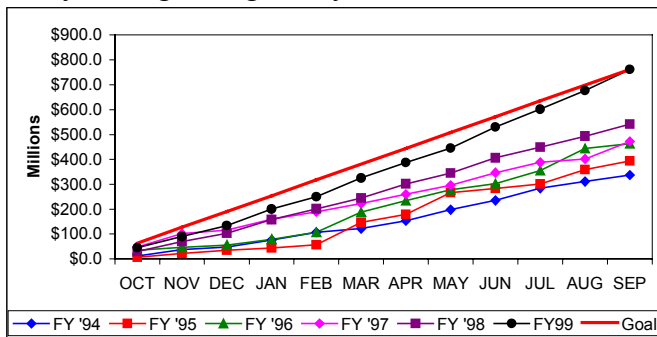


Fig. 7.2-16. Expenditures Trend

**7.2a(2) Marketplace performance** Since we are a reimbursable organization, our funding source is a customer base that is free to look elsewhere for products and services. Fig. 7.2-17 shows the ebb and flow of that base over time. Fig. 3 in the Overview shows our growth in responsibility. Throughout our history, in those areas which we are permitted to market (3.1a(1)), we maintain market share through our ability to offer customers more for their money, quality technical expertise, and responsive cycle time through innovative contracting processes.

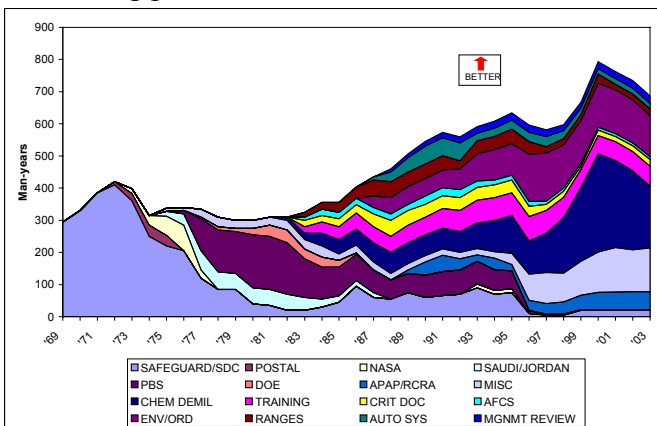


Fig. 7.2-17. Market Growth

Fig. 7.2-18 shows the growth trend for Chem Demil, OE, and Installation Support product lines. The large projected increase for Chem Demil is due to construction starts at three new sites. Because of the FY01 Chem Demil downturn identified during strategic planning, we are preparing a proposal for the two follow-on plants. The increase in Installation Support is due to the transfer of the Center for Public Works (CPW) mission (table 3.1-3). OE workload is projected to remain steady as we substitute advanced technology for our current processes. We also plan to migrate the less sophisticated and less dangerous work to Corps districts. In table 7.1-1, question 18, our customers indicated that 72.7% of our services would increase or remain the same over the next five years.

Fig. 7.2-19 shows our Medical and BMD growth trends since 1992.

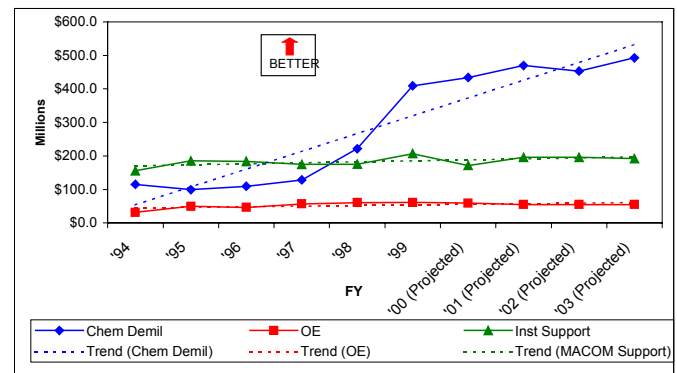


Fig. 7.2-18. Chem Demil, Installation Support, and OE Growth Trends

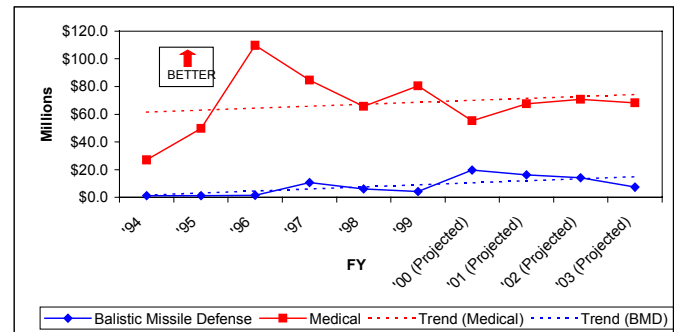


Fig. 7.2-19. BMD and Medical Growth Trends

Results for our operations plan action plans developed during strategic planning are reported in table 2.2-1, column 4, *Status*, and are measured for success as reported in table 4.1-1, Key Success Factors.

### 7.3a Human Resource Results

**7.3a(1) Employee well-being, satisfaction, dissatisfaction and development** Fig. 7.3-1 shows the comparison of our climate surveys conducted in FY95, FY97, and FY98. We attribute higher scores to improvements

in our quality structure. Results show that 17 of the 20 categories set new highs with no new lows.

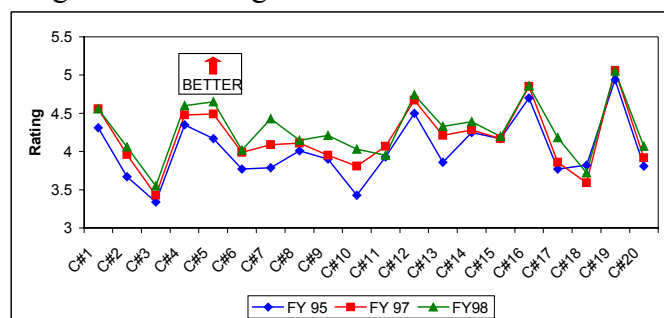


Fig. 7.3-1. Climate Survey

Fig. 7.3-2 shows climate survey results for each internal organization. Major changes were instituted in the lowest rated organizations as explained in 5.3c.

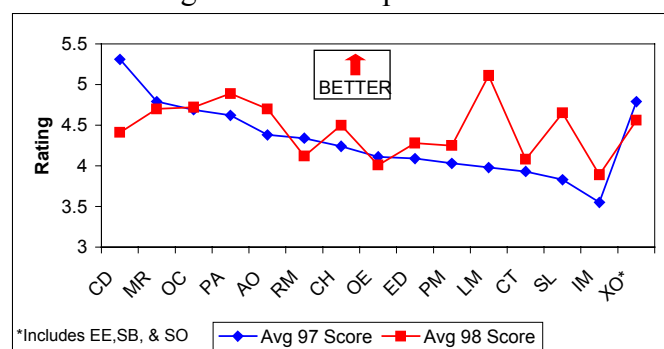


Fig. 7.3-2. Climate Survey By Organization

Fig. 7.3-3 shows an upward trend in sick leave usage, which we attribute to several seriously ill employees last year, the implementation of the Federal Employee Retirement System (FERS), and the implementation of the Family Leave Act. Also shown is the FY97, FY98, and FY99 sick leave rate with the family leave and extended sick leave removed. We attribute the FY99 downturn to counseling and implementing flexiplace.

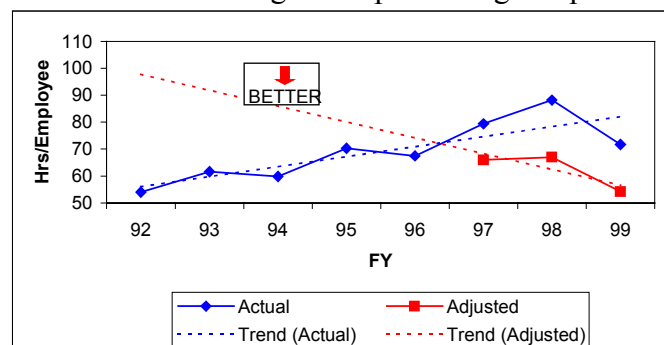


Fig. 7.3-3. Sick Leave Usage Rate

As shown in fig. 7.3-4, membership in our Health and Wellness Program has increased steadily each year since the LIFE Center opened. In November 1996, we started a Health Augmentation Program in an effort to increase LIFE Center use as explained in 5.3a.

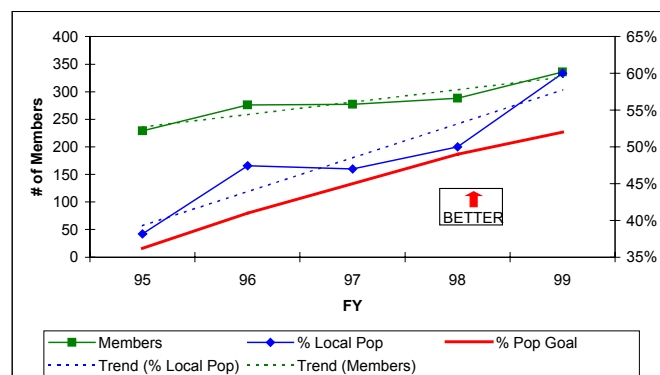


Fig. 7.3-4. LIFE Center Membership Trend

Fig. 7.3-5 shows that LIFE Center users had a lower sick leave usage than those not using the facility.

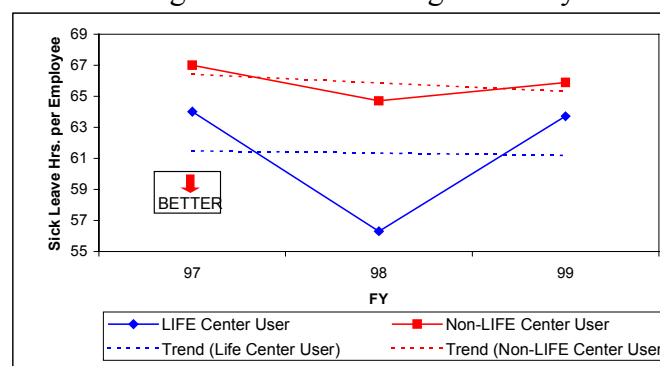


Fig. 7.3-5. Sick leave for LIFE Center Users

Fig. 7.3-6 shows EEO case resolution compared with major USACE organizations. Fig. 7.3-7 shows the case brought forward per FY (both formal and informal).

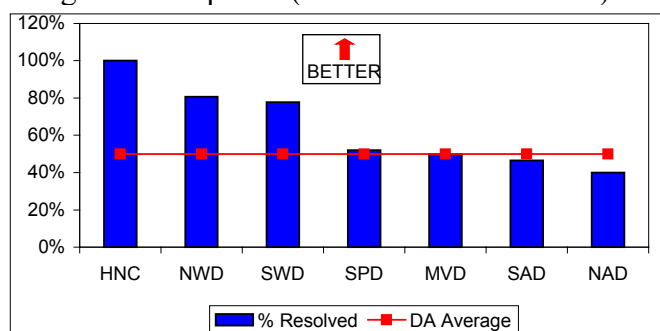


Fig. 7.3-6. EEO Case Resolution Comparison

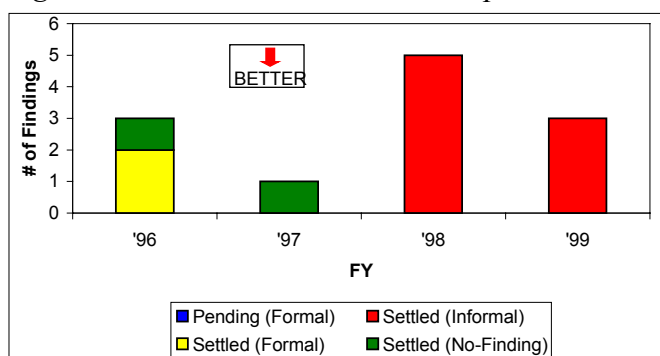


Fig. 7.3-7. EEO Case Resolution

Fig. 7.3-8 shows a negative trend in female personnel caused by two factors: (1) rise in construction hiring (a male-dominated field) and (2) loss of female personnel by HR and RM centralization. Fig. 7.3-9 shows a positive trend in minority representation. Table 2.1-1, team 14, shows action for improving minority hiring.



Fig. 7.3-8. Female Representation

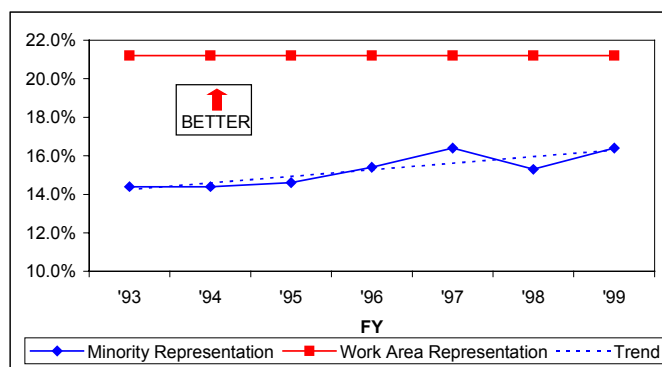


Fig. 7.3-9. Minority Representation

Fig. 7.3-10 shows a comparison of the percent of change in affirmative action hiring for minorities and women for grades 13 through 15.

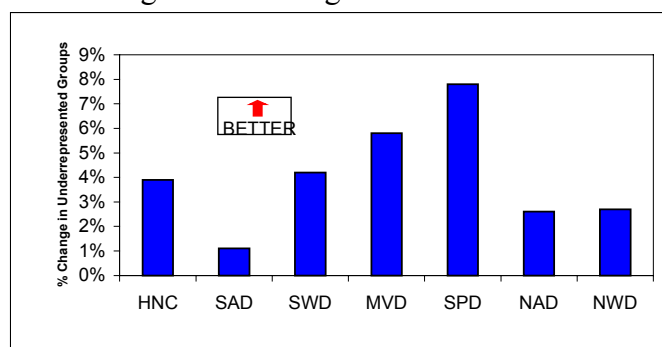


Fig. 7.3-10. Affirmative Action Progress Compared

Fig. 7.3-11 shows that our internal safety record as measured in lost-time accident rate is better than the Corps-wide and Army rate. The Corps of Engineers maintains the best safety record in the industry. The lost-time frequency rate measures the rate of time lost from accidents per 100 man-years.

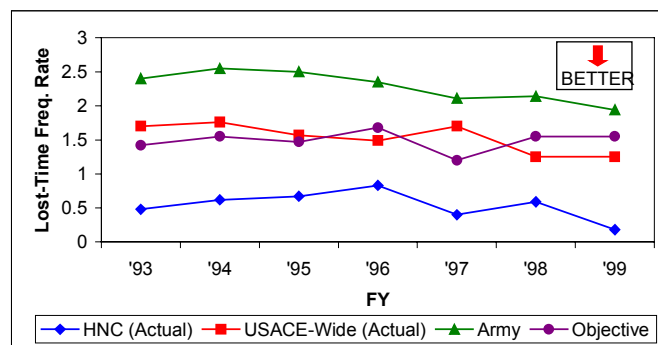


Fig. 7.3-11. Lost-Time Frequency Rate

Fig. 7.3-12 shows the number of employees certified by our Administrative Support Group (ASG) Program by level. ASG certification, described in 5.2a(7) is a key measure for competency of our administrative support staff. Loss of ASG-certified personnel is attributed to promotions to other organizations, indication that certification is a competitive advantage.

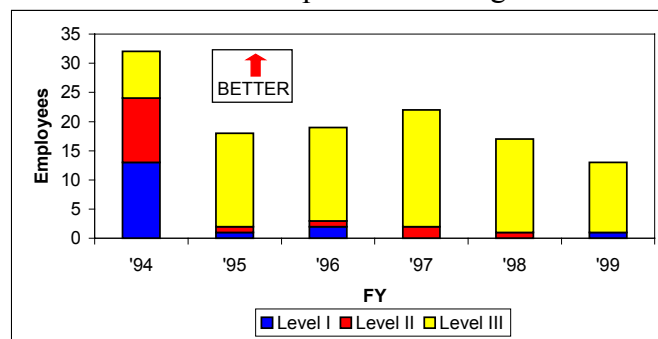


Fig. 7.3-12. ASG Certification

The 1991 Defense Acquisition Workforce Improvement Act (DAWIA) established certification-training requirements for our acquisition work force. Fig. 7.3-13 shows that 89% of our current eligible work force is fully certified by close of FY99.

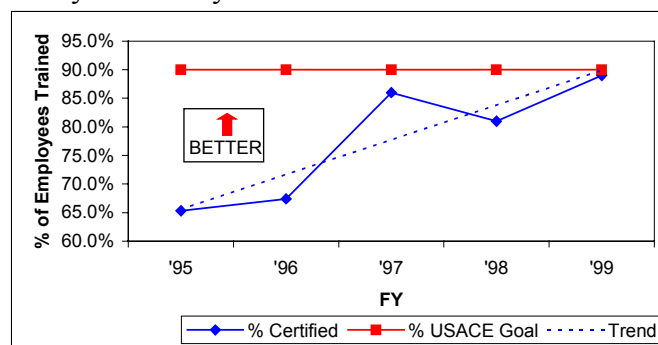


Fig. 7.3-13. DAWIA Certification

Fig. 7.3-14 shows our professional registration trending upward in all categories. This offers our customers a high level of technical expertise to deliver quality products.

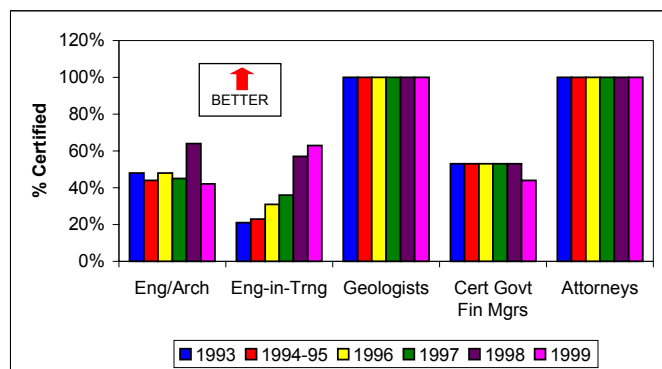


Fig. 7.3-14. Professional Registration

**7.3a(2) Work system performance and effectiveness**

Our work system is explained in 5.1a(1). Through our work system, we reduce boundaries, maintain cost effectiveness, and adapt to a changing environment. We track work system effectiveness through the correlations listed in table 7.3-1. All indicators show improved efficiency and customer satisfaction since we realigned and adopted our team-based structure.

Table 7.3-1. Work system effectiveness correlations

| Metric                                  | Fig. Reference  | Correlation Trend |
|---|---|-------------------|
| Overall Customer Satisfaction & Loyalty | 7.1-1, -2, -9, -10; 7.2-17, -18, -19                      | Improved          |
| Productivity                            | 7.2-3, -4, -5, -6, -7a, -7b; table 7.2-1                  | Improved          |
| Flexibility/Responsiveness              | 7.1-1 #8; 7.1-2   | Improved          |
| Cost                                    | 7.1-1 #7; 7.1-2, -3; 7.2-1, -2, -8, -9, 10, -11, -12, -13 | Improved          |
| Quality                                 | 7.1-1 #'s 6 & 13; 7.1-2, -4; 7.5-50                       | Improved          |
| Cycle Time                              | 7.5-1, -3, -36, -37, -47                                  | Improved          |
| Innovation                              | Table 7.5-1 outside awards                                | Improved          |

Fig. 7.3-15 shows our supervisor ratio trend. Our FY99 supervisor ratio is based on our current approved staffing plan and exceeds the Department of Army goal because of a hiring lag, which will correct itself with full staffing.

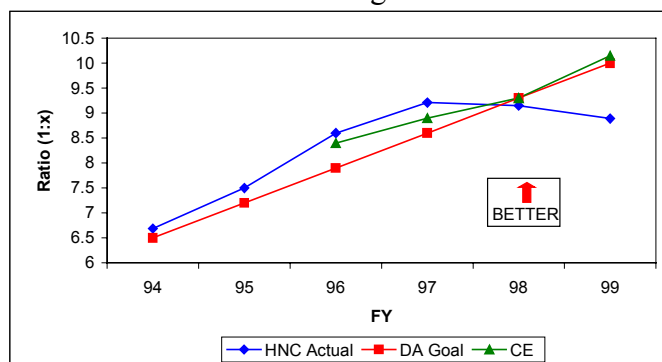


Fig. 7.3-15 Employee-Supervisor Ratio

Figs. 7.3-16, -17, -18 and -19 show our 360 rating summaries. We use 360 to target training, leadership, and other improvement areas items 1.1a(1), 5.1a(3)).

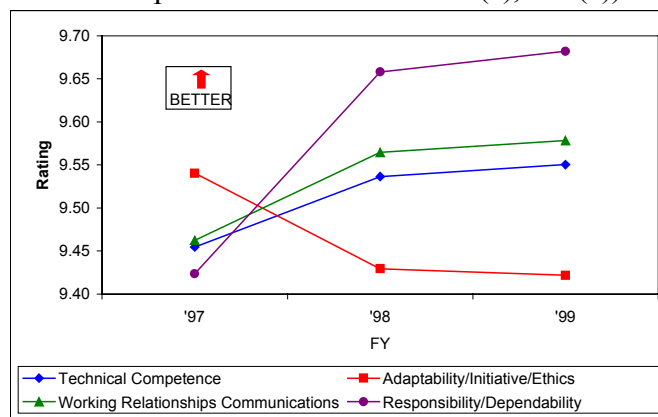


Fig. 7.3-16. 360's for GS-08's and below

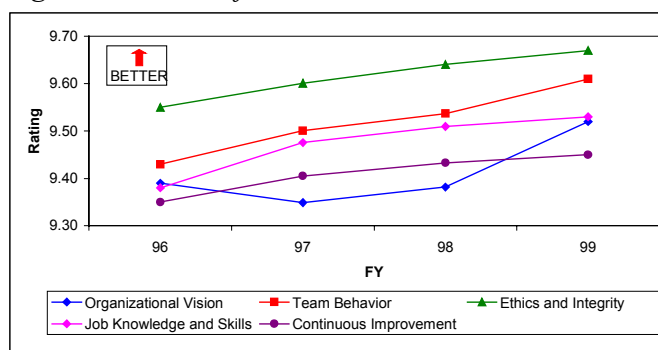


Fig. 7.3-17. 360's for GS-09 through -12's

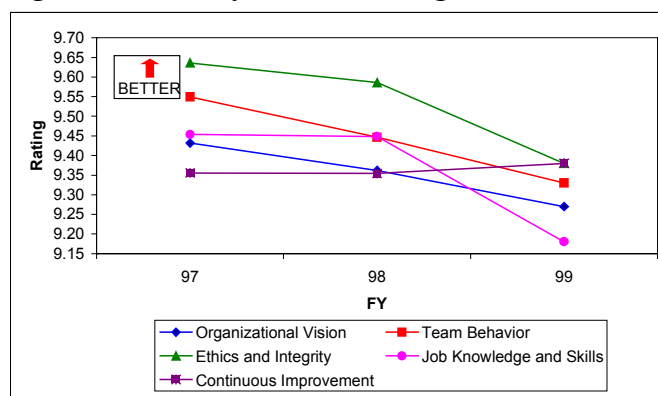


Fig. 7.3-18. 360's for GS-13's and Up, Non-supervisory

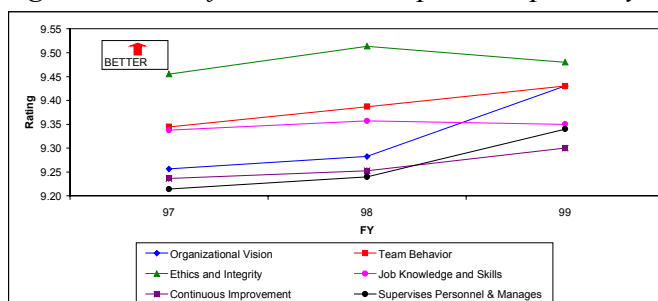


Fig. 7.3-19. 360's for GS-13's and Above, Supervisory

**7.4a Supplier and partner results** Our major suppliers and partners are listed in table 1 and discussed in paragraph 9 of the Overview. We manage them through the processes outlined in 6.3 and in fig. 6.3-1. Fig. 7.4-1 shows that our major contracting firms have TLM's that are at or near the industry average.

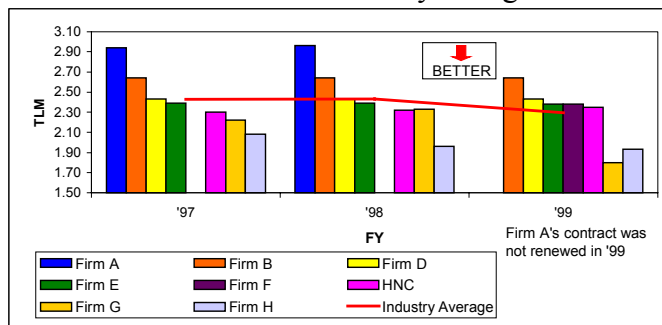


Fig. 7.4-1. Supplier TLM Results

Fig. 7.4-2 shows the results of our Simplified Acquisition supplier rating system for purchases under \$100K—an improvement initiated by our gap analysis.

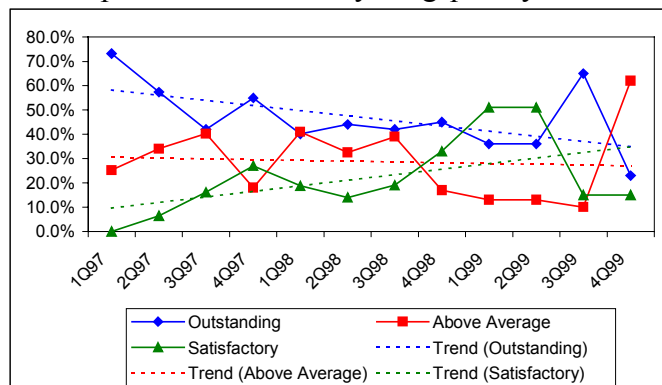


Fig. 7.4-2. Supplier Rating Results

Fig. 7.4-3 shows results for SSCASS (table 4.1-2), an evaluation system for service contracts over \$100K, implemented in the second quarter of FY97.

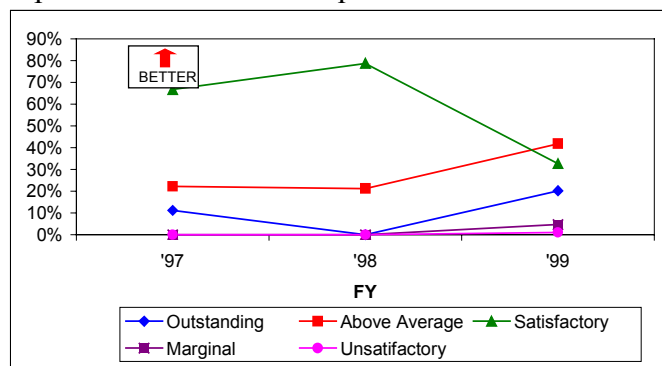


Fig. 7.4-3. FY97 through FY99 SSCASS Rating

We ask our customers to evaluate our A-E contractors' performance on our external customer survey. Fig. 7.4-4 shows a marked improvement. Figs. 7.4-5 and -6 show the same improvement.

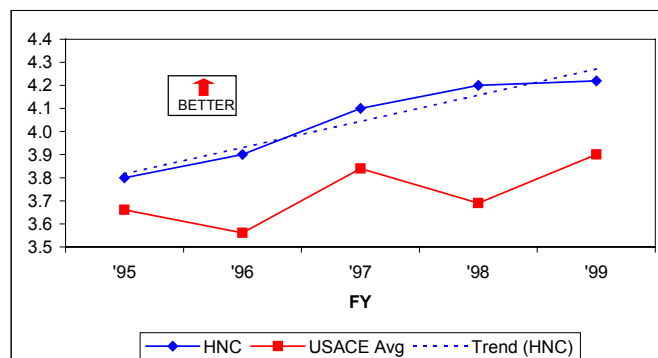


Fig. 7.4-4. A-E Contractor External Customer Survey Performance—Trend and Comparison

The performance ratings of our A-E contractors are maintained in ACASS, an automated database (table 4.1-2). Figs. 7.4-5 and 7.4-6 show our A-E supplier performance ratings since FY91.

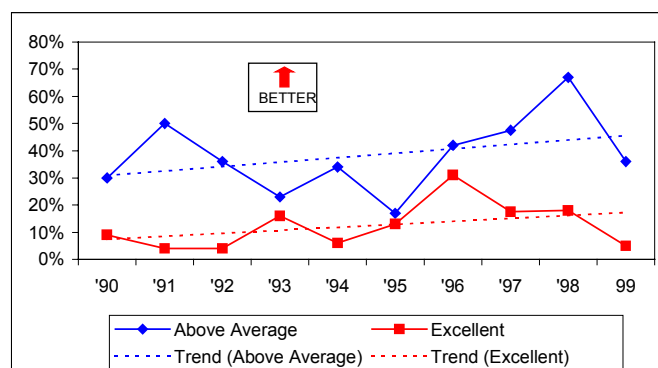


Fig. 7.4-5. A-E Contractor Performance (Excellent & Above Average)

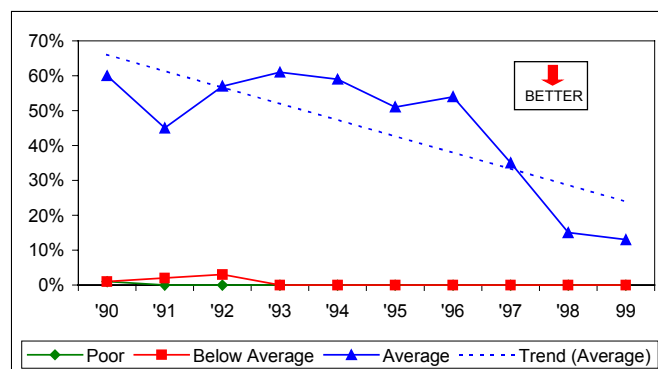


Fig. 7.4-6. A-E Contractor Performance (Average, Below Average, & Poor)

Figs. 7.4-7, -8, and -9 show early-late start charts for construction at Umatilla, Anniston, and Pine Bluff—the Chem Demil sites currently under construction. We use this chart to track the rate of placement against the earliest and the latest start times. If the green line falls below the red line, the construction schedule and budget are at risk.

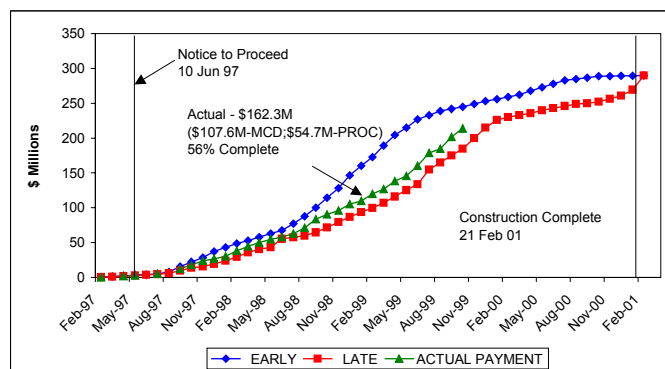


Fig. 7.4-7. Umatilla Early-Late Start Chart

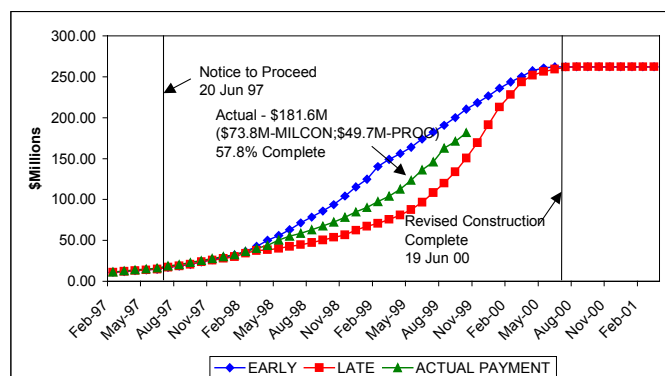


Fig. 7.4-8. Anniston Early-Late Start Chart

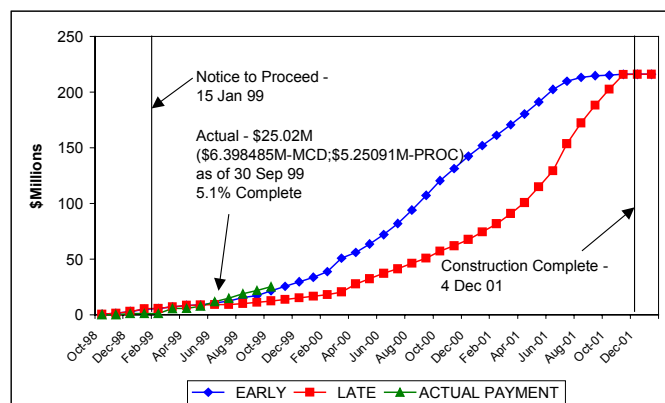


Fig. 7.4-9. Pine Bluff Early-Late Start Chart

Figs. 7.4-10 and 7.4-11 show the cumulative MILCON cost growth for the Umatilla and Anniston Chem Demil sites. The goal is not to exceed the programmed amounts of \$171.2 and \$137.9 million, respectively. The bottom dollar figures are the award amounts.

Fig. 7.4-12 shows that we track time growth for our Chem Demil sites as controllable, user-requested, and weather related. Pine Bluff and Umatilla have had zero time growth, and Anniston has had a 0.41% increase in schedule because of weather.

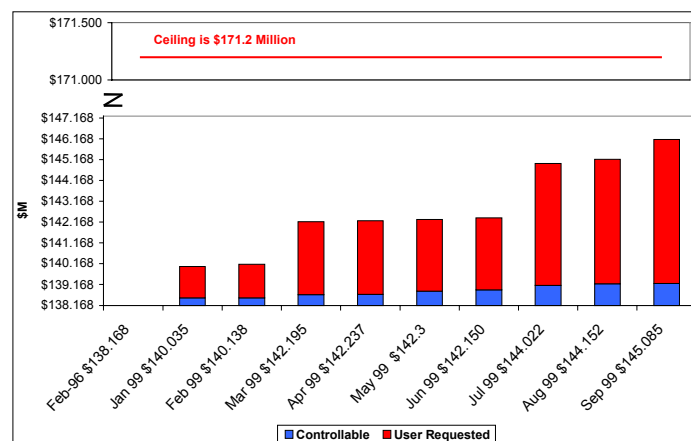


Fig. 7.4-10. Cost Growth for Umatilla

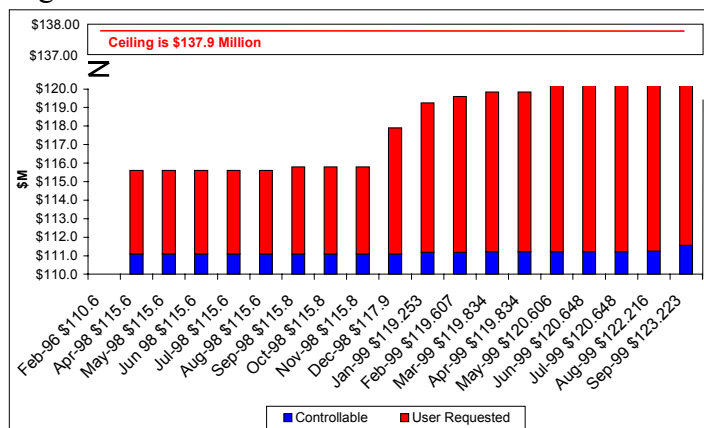


Fig. 7.4-11. Cost Growth for Anniston

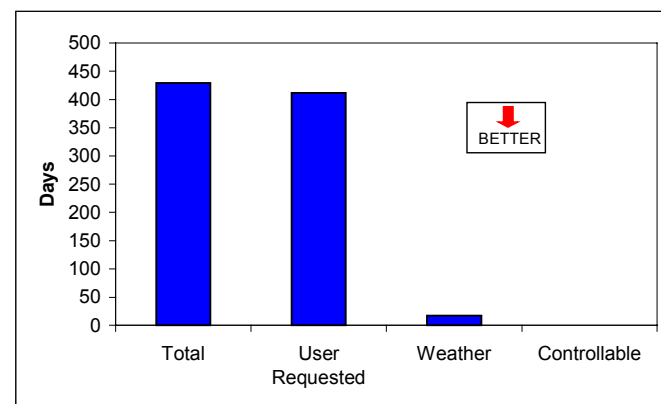


Fig. 7.4-12. Time Growth for Chem Demil

Fig. 7.4-13 shows that the cost of our Energy and Medical contractors performing the work in the field on our innovative O&M process is essentially the same as the traditional invitation for bid (IFB). Thus, we get the same cost and quality from our suppliers through our streamlined process that we would get if we used the traditional process. However, our innovative process produces in-house cost and time savings as shown in figs. 7.5-1, -2, -4, and -6.



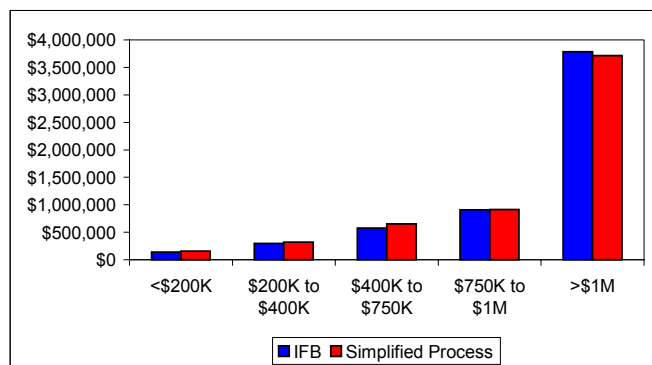


Fig. 7.4-13. Comparison of Construction Cost IFB vs. Simplified Process

Fig. 7.4-14 shows the comparison and trend for contractor lost workday rate. The Corps of Engineers maintains the best safety record in the industry. We are able to achieve a strong safety record through the methods summarized in table 5.3-1.

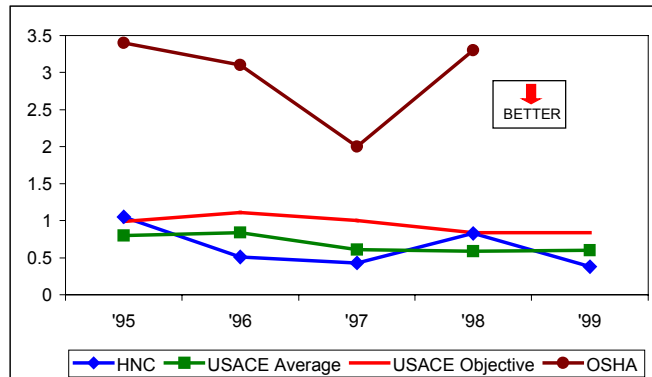


Fig. 7.4-14. Supplier Safety Data

Civilian Personnel Operations Center (CPOC) and Civilian Personnel Advisory Center (CPAC) supply our personnel recruitment actions. The assumed responsibilities from our internal HR Office in third quarter FY97. Fig. 7.4-15 shows the average time to process a SF52 action since FY94. We negotiated a servicing agreement with them to improve their response time.

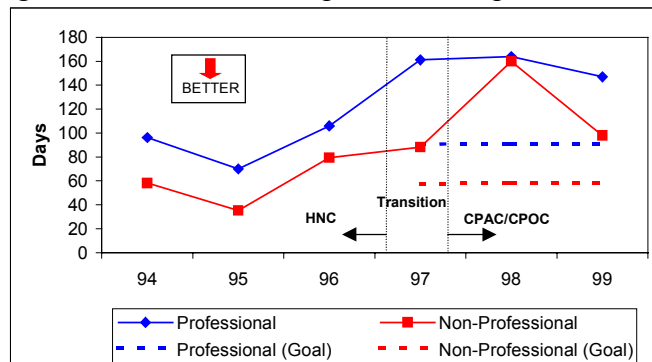


Fig. 7.4-15 Average Time to Process SF52 Actions

Fig. 7.4-16 shows the award fee for our Russian Demil contractor, based on cost, schedule, quality, and

customer satisfaction metrics in the contract. It is contractor profit and a quality measure. An evaluation board including the customer determines the award.

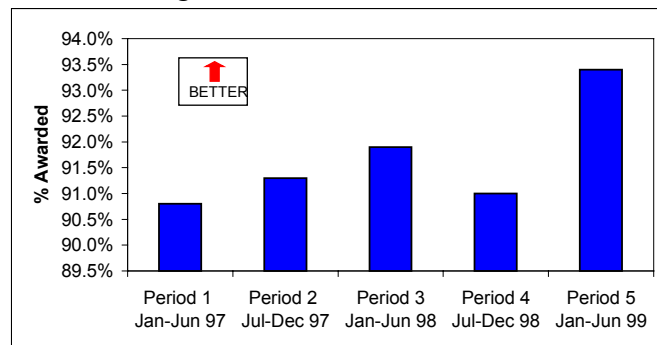


Fig. 7.4-16. Russian Demil Contract—Average Award Fee Board Rating

### 7.5a Organizational Effectiveness Results

**7.5a(1) Key delivery, design, production, and support process levels and trends** As shown in fig. 6.1-3, our four key processes are programs and process management (P&PM), contract management (CT), engineering and technical services (ED), and construction management. Besides monitoring those processes individually, we also track performance as they are integrated, executed, and managed through our integrated process teams (IPT's). Figs. 7.5-1 thru 7.5-10 show key IPT measures.

Our Medical IPT has reduced cycle time to meet our customer's requirements. Fig. 7.5-1 shows that our innovative O&M process is three times faster for simple requirements and two times faster for minor engineering efforts. Ninety percent of the projects in this program fall into those two categories.

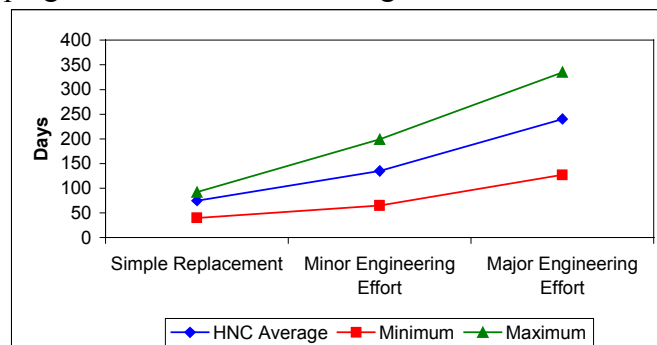


Fig. 7.5-1. Medical O&M Cycle-time Comparison

Fig. 7.5-2 shows that through our innovative O&M process, administrative costs are much less than for traditional methods, providing customers a lower total cost. Overall, the cost of a work plan (design) and the administration of a project from inception to closeout is 11.3% of program amount (PA) versus the traditional 30%. We have saved our Medical customers \$27.6M on 333 projects.

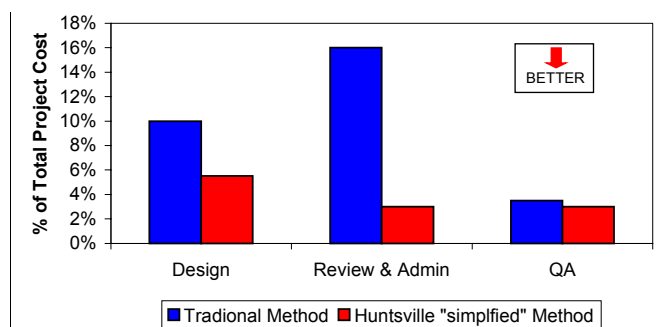


Fig. 7.5-2. Medical O&amp;M Process Comparison

Fig. 7.5-3 shows that our Energy IPT O&M process provides services 200 days faster than the traditional method, increasing our energy customers from 4 in FY94 to 6 in FY95 to 7 in FY96 to 9 in FY97 to 14 in FY98 to 23 in FY99. (Same process as for Medical.)

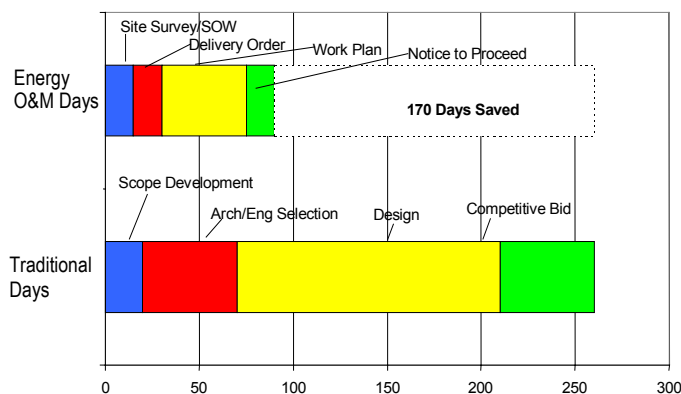


Fig. 7.5-3 Energy O&amp;M Process Cycle-time Reduction

Fig. 7.5-4 shows Energy IPT savings through our innovative O&M process. Our Energy IPT has saved nearly \$30M for 265 projects from FY92-FY99.

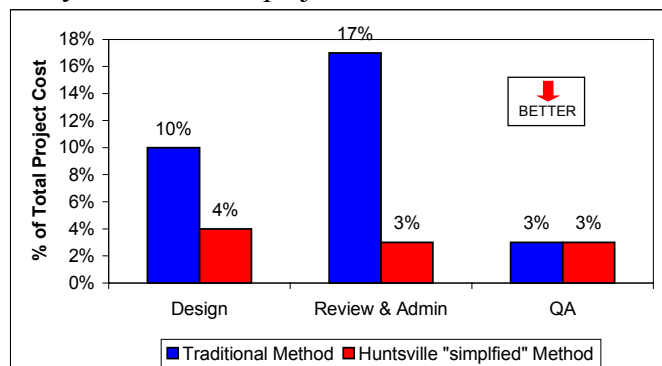


Fig. 7.5-4. Energy O&amp;M Process Cost Comparison

Fig. 7.5-5 shows that our Energy IPT reduced contract award cost from \$140K to \$20K and time from 24 to 6 months for Energy Savings Performance Contracts (ESPC's). The FY92-94 contracts were single solicitations for single contracts with detailed technologies and scopes of work. The FY95-96 contracts were single solicitations for single requirements (no scopes of

work). The FY97-FY99 contracts were single solicitations for multiple ID/IQ contracts (no scopes of work).

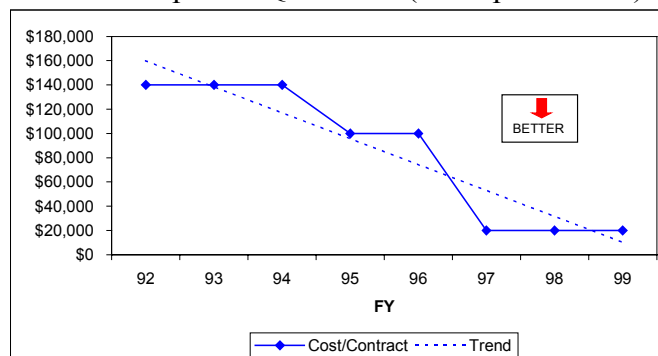


Fig. 7.5-5. ESPC cost reduction

Our Unaccompanied Personnel Housing (UPH) IPT acquires cots, bunks, lockers, etc., for soldiers. Fig. 7.5-6 shows savings to customers over previous budgets, thereby providing more furnishings for troops.

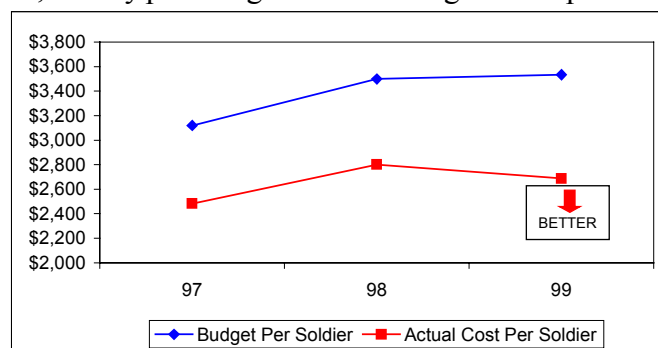


Fig. 7.5-6. UPH Savings

Fig. 7.5-7 shows the TRACES IPT hotline support.

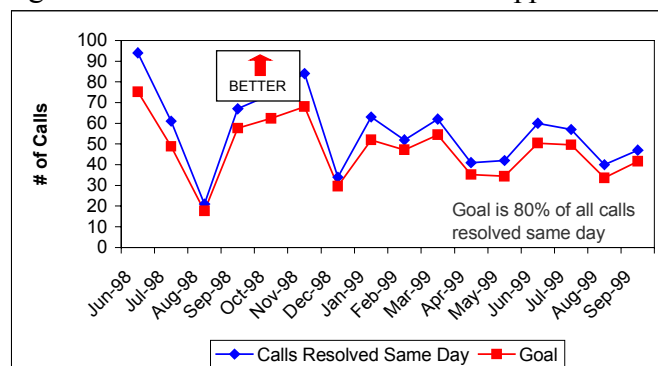


Fig. 7.5-7. TRACES Hotline Support

Fig. 7.5-8 shows the cost per acre of OE IPT's engineering evaluation/cost analysis (EE/CA) process. Fig. 7.5-9 shows the cost per acre of OE removals. Data are used to determine when to apply the EE/CA process. For example, for a small site, we can use the cost per acre for a site with a similar history and characteristics to compare the cost of a removal versus the cost of a full EE/CA. In that way, we reduce costs without sacrificing quality or safety.



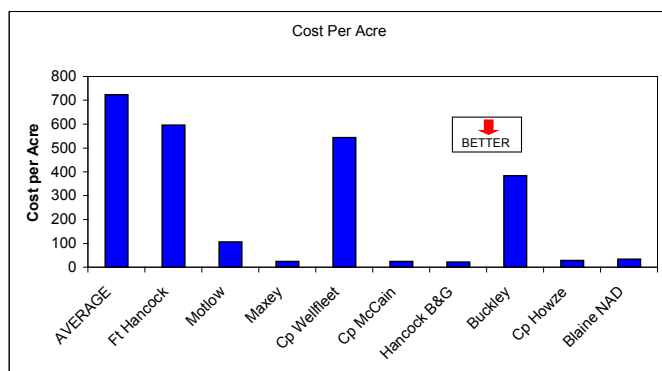


Fig. 7.5-8. Cost Per Acre for EE/CA's on OE sites

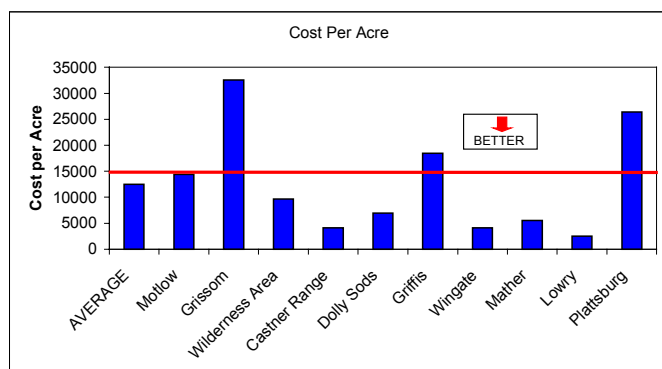


Fig. 7.5-9. Cost Per Acre for OE Removals

Fig. 7.5-10 shows the OE IPT's labor charges to overhead trend. In the fourth quarter FY95, OE was established as a directorate with its own DOH goal. The FY98 increase was due to an unexpected funding method change requiring certain work be charged to overhead. Monitoring overhead ensures fair cost distribution to customers.

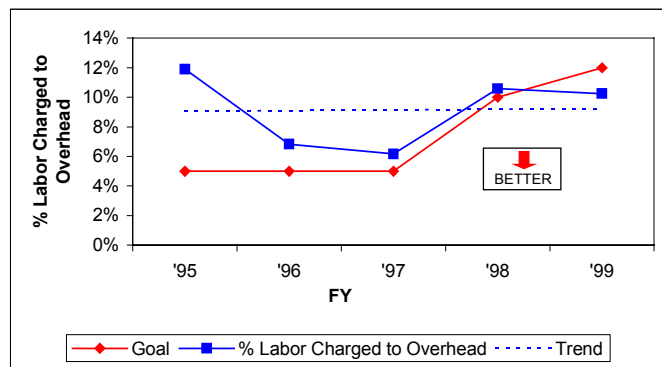


Fig. 7.5-10. OE % of Labor Charged to Overhead

Figs. 7.5-11 through 7.5-14 show the results for our P&PM process. Fig. 7.5-11 shows labor charges to overhead trend. Goal adjustment was due OE being structured as an independent team. FY97 costs are due to mandated PROMIS implementation.

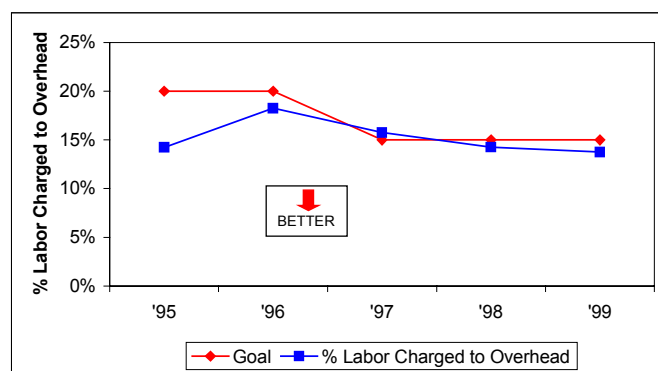


Fig. 7.5-11. P&amp;PM's % of Labor Charged to Overhead

Fig. 7.5-12 shows the reduction in the percent of in-house labor per the total project management dollars administered by HNC. We analyze this trend for unexplained increases, which may indicate loss of productivity, rework, or other problems. We attribute the downward trend to increased process efficiency. Figs. 7.5-13 are aggregated in table 7.2-1. Fig. 7.5-13 shows the increased workload for the P&PM process as measured in expenditures per FTE.

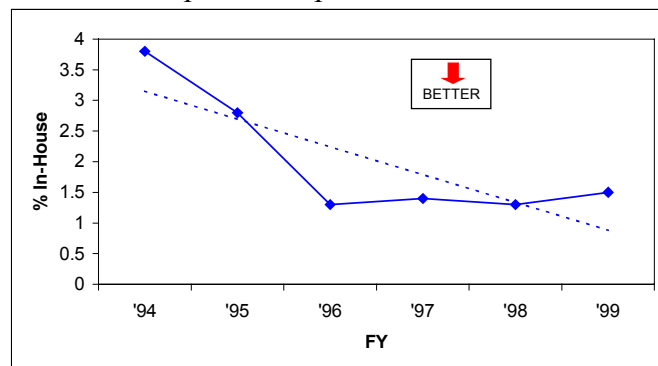


Fig. 7.5-12. In-house Labor vs. P&amp;PM's Dollars

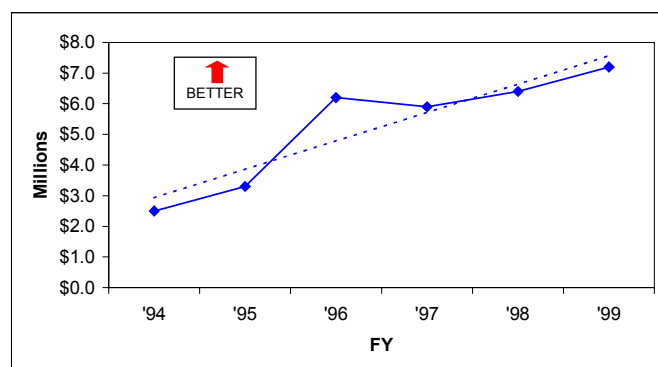


Fig. 7.5-13. P&amp;PM's Workload per FTE

We ask our customers to evaluate our P&PM process on our external customer survey. Fig. 7.5-14 shows a significant improvement since we adopted Baldrige.

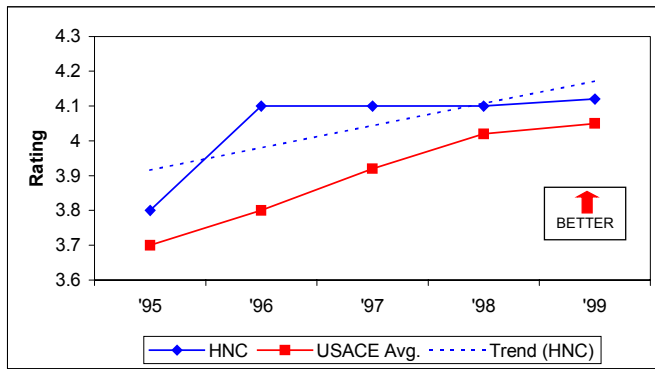


Fig. 7.5-14. P&PM's External Customer Survey Performance—Trend and Comparison

Figs. 7.5.15 through 7.5-25 are results for our engineering and technical services process. Fig. 7.5-15 shows how work plan (design) cost as a percentage of placement cost varies with the project size and how our costs compare to the USACE military program average for the same work. Because of the cost associated with the smallest projects (<\$100K), we use an even more efficient credit card process for such jobs.

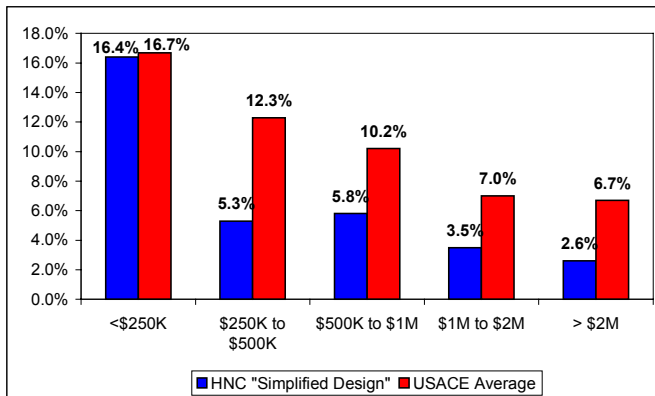


Fig. 7.5-15 Work Plan Cost Compared to USACE

Fig. 7.5-16 shows a design cost index (DCI) comparison of A-E designs. The DCI is a number calculated by dividing the actual design cost by the target design cost. That number would be 1.0 if actual cost equal the target cost. Therefore, a DCI less than 1.0 means actual costs are below the target. Most of our DCI's are below 1.0.

Fig. 7.5-17 shows that our in-house design costs are below the HQUSACE target.

Fig. 7.5-18 shows that our range design process has improved since FY94 through design standardization and increased communication with the customer.

Fig. 7.5-19 shows the engineering directorate (ED) process labor charges to overhead trend.

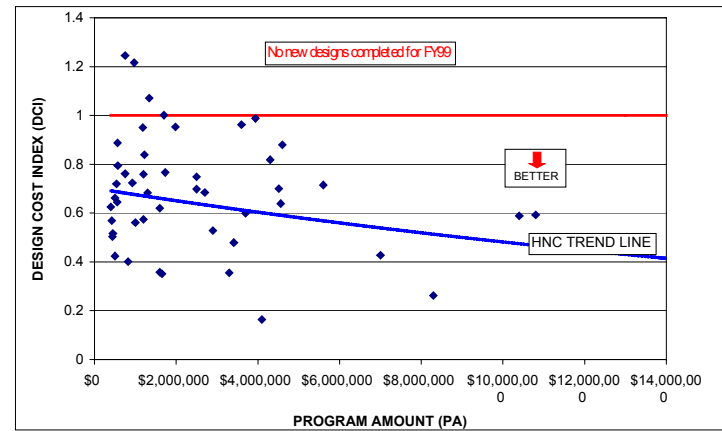


Fig. 7.5-16. Design Cost Index

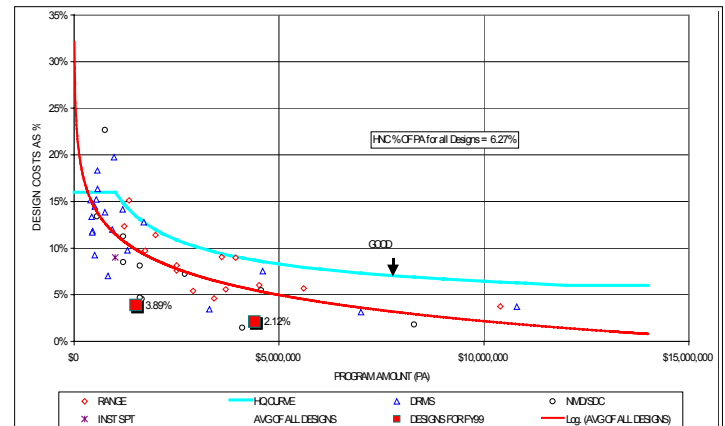


Fig. 7.5-17. Design Cost as % of PA

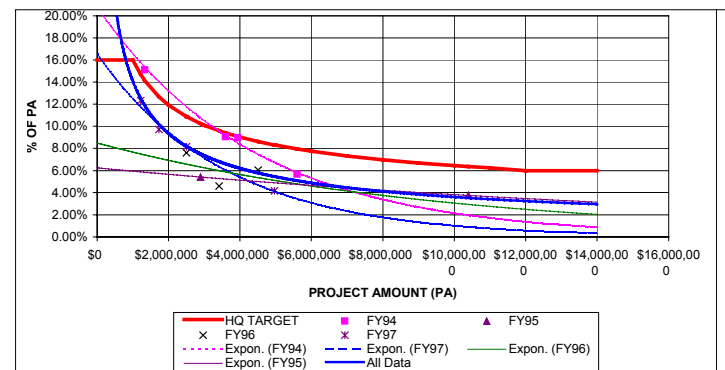


Fig. 7.5-18. Ranges Design Cost as % of PA

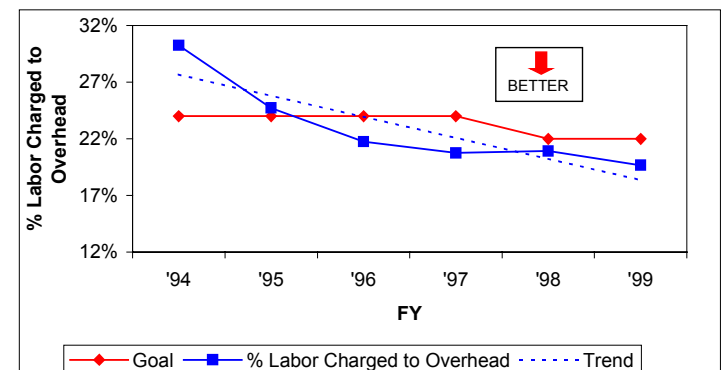


Fig. 7.5-19. ED's % of Labor Charged to Overhead

We track key process overhead monthly to ensure even work distribution over the year, which is a significant productivity factor. For example, fig. 7.5-20 shows that engineering had a more even distribution of charges to overhead in FY99 than in previous years.

Fig. 7.5-21 shows reduced in-house labor per total engineering dollars administered by HNC. We analyze this trend for unexplained increases, which may indicate loss of productivity, rework, etc. We attribute the downward trend to engineering process improvement. Fig. 7.5-22 shows the increased workload for engineering as measured in expenditures per FTE.

Figs. 7.5-21 and -22 are aggregated in table 7.2-1.

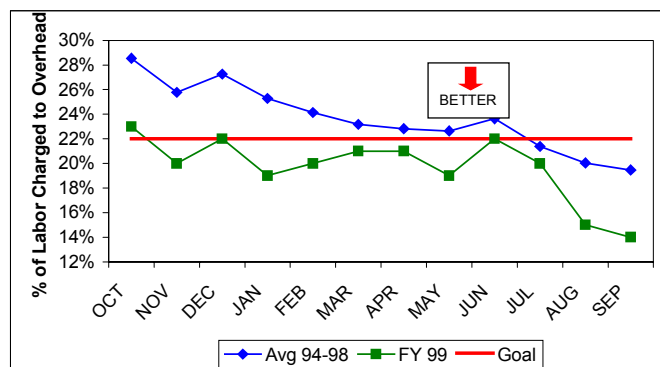


Fig. 7.5-20. Engineering's % of Labor Charged to Overhead per Month

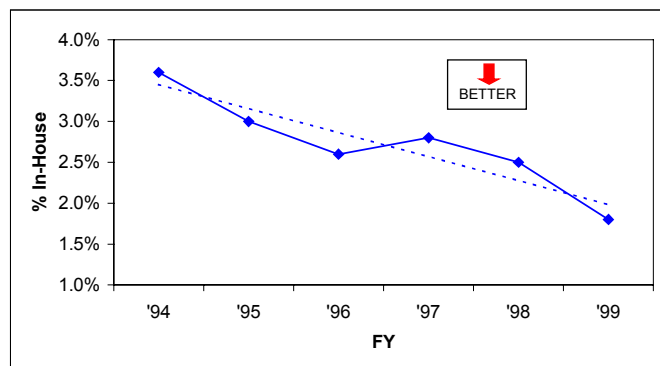


Fig. 7.5-21. Design in-house Labor vs. ED Dollars

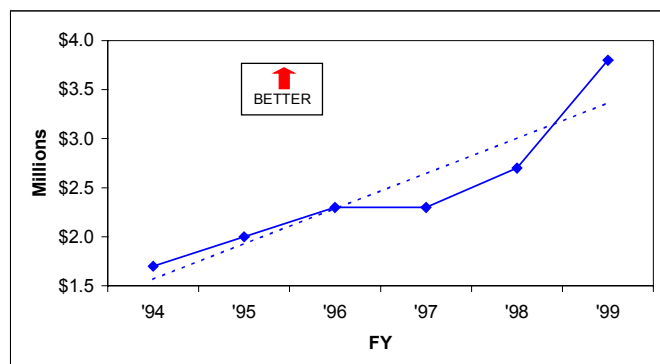


Fig. 7.5-22. Engineering Workload per FTE

Fig. 7.5-23 shows the number of internal task orders passing through our Engineering Directorate (ED). This is one way we measure work load and on-time delivery throughout the product lines. Since increases in late taskings indicate increased workload, we are currently hiring additional technical employees.

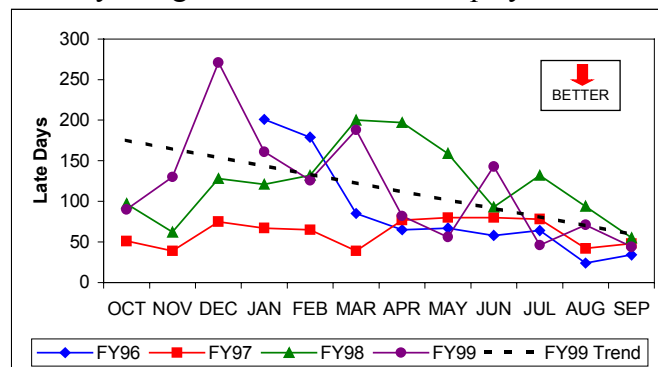


Fig. 7.5-23. Late Taskings Recorded by Month

We ask our customers to evaluate our engineering design process on our external customer survey. Fig. 7.5-24 shows significant improvement since we adopted Baldrige.

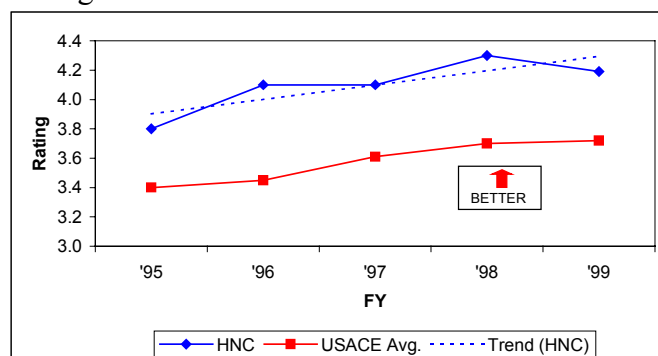


Fig. 7.5-24. Engineering Design External Customer Survey Performance

Fig. 7.5-25 shows an upward trend in value engineering (VE) savings. We evaluate Military Construction, Army (MCA) projects with costs of \$2M or more and all other acquisitions of \$1M or more for VE potential.

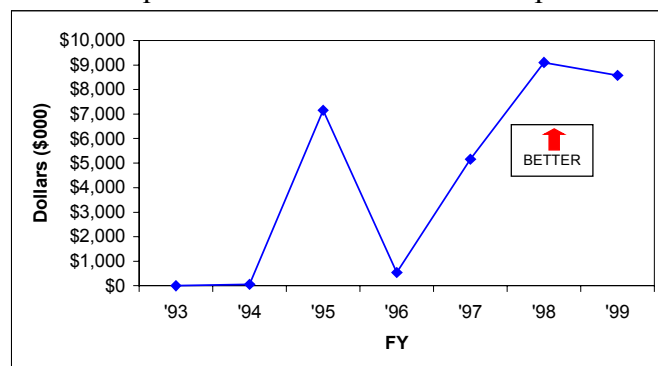


Fig. 7.5-25 Value Engineering Savings

Figs. 7.5-26 through 7.5-32 show results for our construction management process. Our only construction mission is Demilitarization, which includes the construction of Chem Demil plants in the U.S. and Russia.

Costs associated with managing the construction of Chem Demil sites include supervisory and administrative (S&A), contingency, engineering during construction (EDC), and as-builts. We control these costs to ensure there are no overruns. Also, these costs are indicators of process inefficiencies and quality problems, since increases here may indicate bottlenecks or rework. Figs. 7.5-26 and -27 show construction management costs for our Anniston and Umatilla sites.

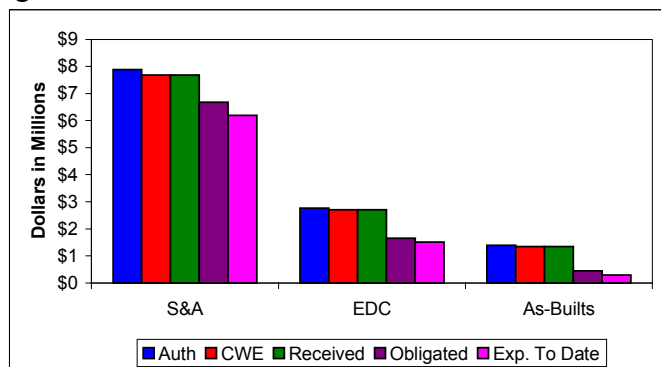


Fig. 7.5-26. Anniston Construction Mgt. Costs

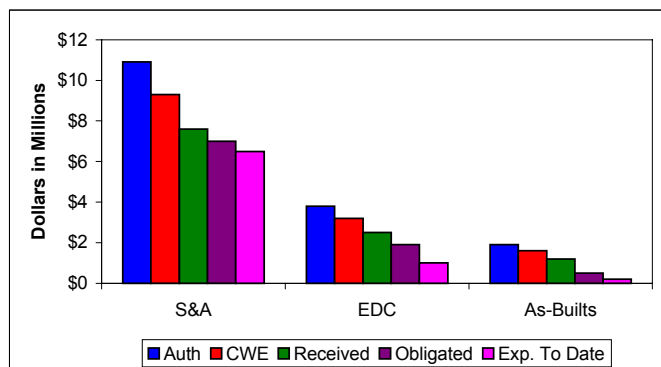


Fig. 7.5-27. Umatilla Construction Mgt. Costs

Fig. 7.5-28 depicts the expected construction S&A rates for the life of the whole Chem Demil stockpile program. The overall program is well within all targets. The high S&A charge in FY98 was due to work on changes with very little placement. That effect often occurs with each construction site startup when equipment is being purchased. The cumulative rates for construction life, however, are well below the goal.

Fig. 7.5-29 shows the request for information (RFI) response time for the Anniston Chem Demil site.

Fig. 7.5-30 shows the construction management labor charges to overhead trend.

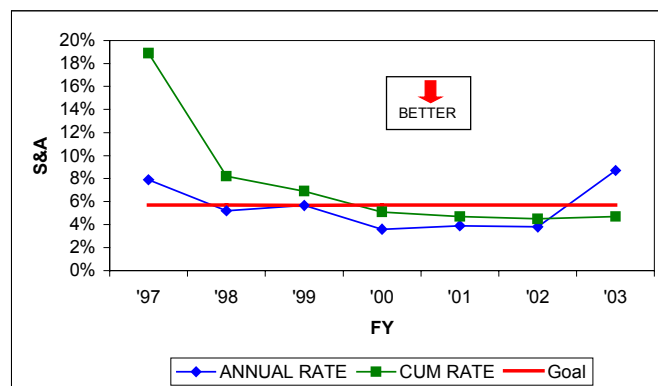


Fig. 7.5-28. Total S&A for Life of Stockpile Program

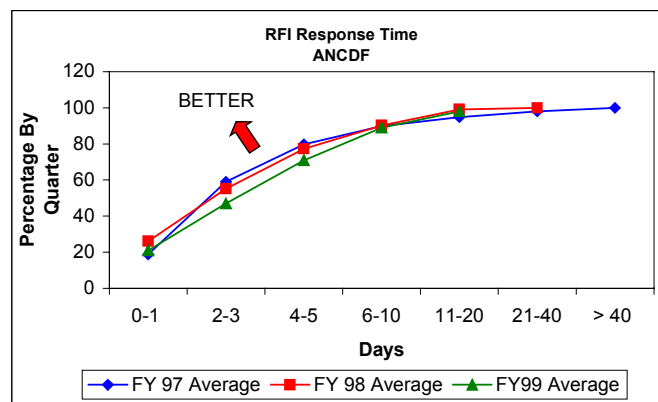


Fig. 7.5-29. Anniston RFI Response Time

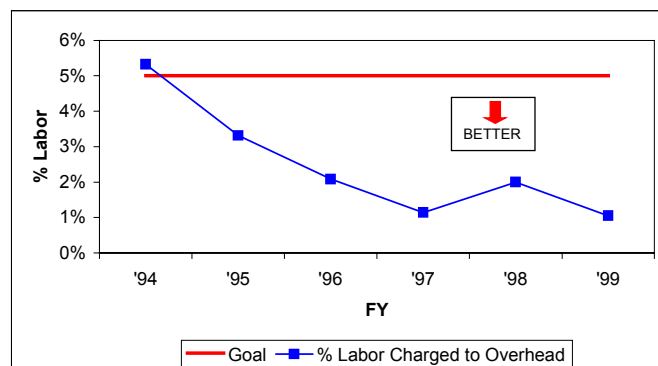


Fig. 7.5-30 Construction Management % of Labor Charged to Overhead

Fig. 7.5-31 plots HNC's construction S&A earned rate against the expensed rate. The Corps of Engineers charges a flat S&A rate of 5.7%. The plot shows that over the life of Chem Demil construction, we will manage the work for less than the flat rate. This is one of our efficiency measures for construction.

Fig. 7.5-32 shows significant improvement in the number of critical noncompliance reports on Chem Demil construction management quality audits. We attribute this positive trend to the implementation of a more systematic quality audit process.

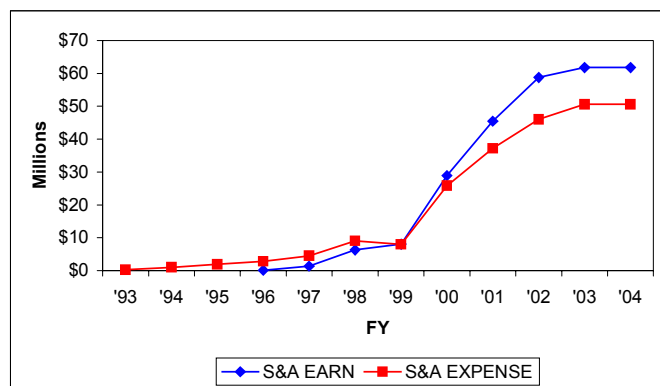


Fig. 7.5-31. Construction S&amp;A earned vs. expensed

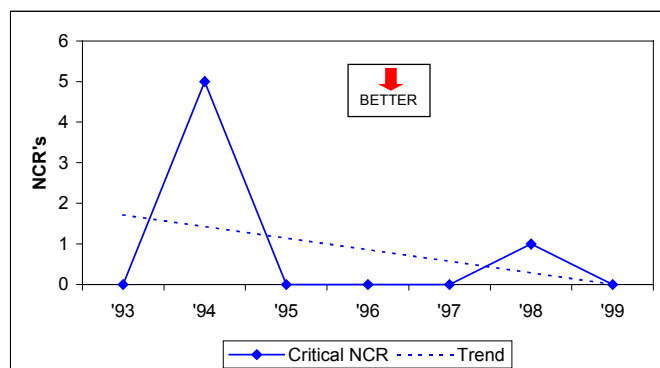


Fig. 7.5-32. Construction Mgt. Audit Trend

Figs. 7.5-33 through 7.5-39 show results for our contract management process.

Fig. 7.5-33 shows contract management labor charges to overhead. In October 1995, we established a separate departmental overhead account for our Contracting Directorate (CT). In October 1997, we eliminated the G&A account funding, resulting in expected increases in departmental overhead charges. However, this arrangement helps us control distributed costs across the whole organization and thus ensures fair distributed costs to customers. We are the only government organization that distributes contracting costs this way.

Fig. 7.5-34 shows significant reduction in the percent of in-house labor per the total contract dollars administered by HNC since adopting Baldrige. We attribute our downward trend to increasing contract management process efficiency. Figs. 7.5-34 and -35 are aggregated in table 7.2-1.

Fig. 7.5-35 shows the increased workload for the contracting management process as measured in expenditures per FTE.

Fig. 7.5-36 shows the reduction in cycle time to award a service contract. Most contracts we issue are service contracts.

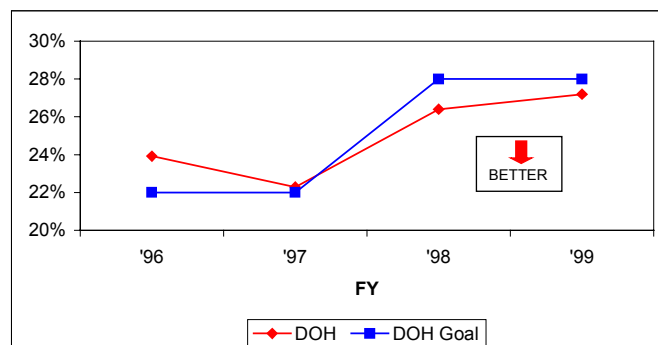


Fig. 7.5-33. Contract Management % of Labor Charges to Overhead

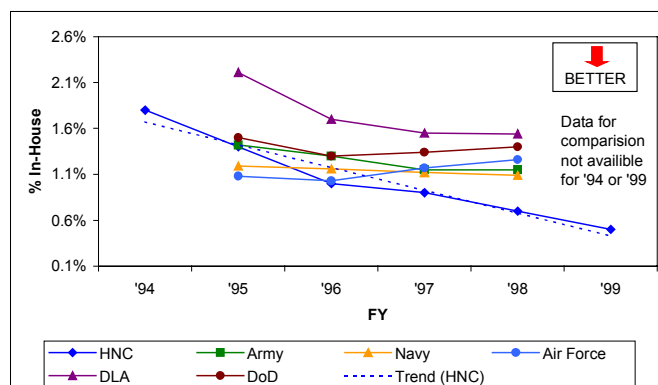


Fig. 7.5-34. Contract Management In-house Labor vs. Contract Dollars and Competitive Comparison

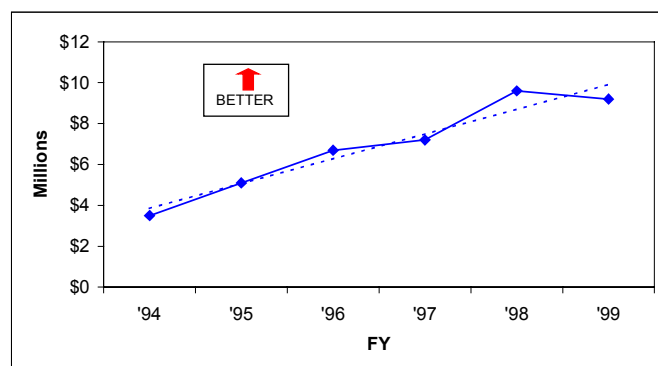


Fig. 7.5-35. Contract Management Workload per FTE

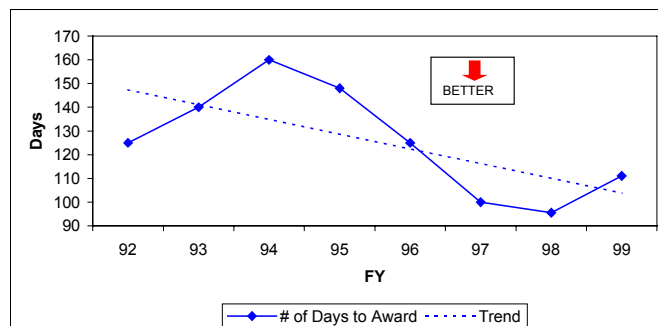


Fig. 7.5-36. Average Number of Days to Award Service Contract

Fig. 7.5-37 shows the reduction of the procurement administrative lead time (PALT) cycle time to process a delivery order (DO).

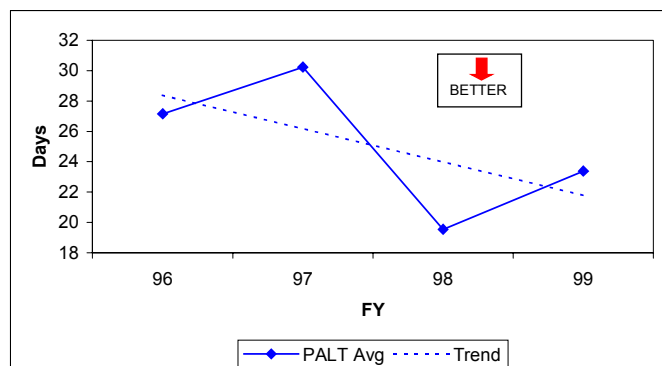


Fig. 7.5-37 Average Number of Days to Award a DO

Fig. 7.5-38 shows that we have successfully shifted the bulk of our contract awards from the third and fourth quarters to the first and second quarters. Awarding more contracts early in the year shows an efficient use of resources.

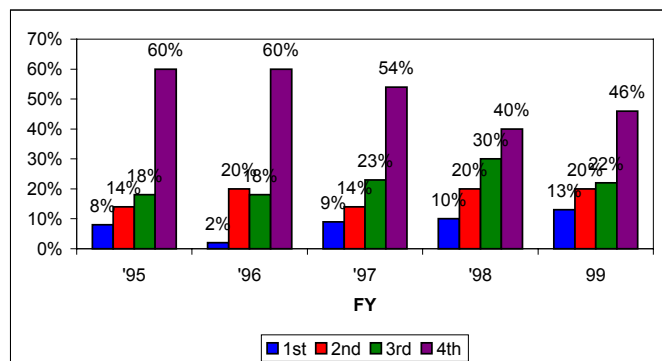


Fig. 7.5-38 Contract Award Distribution

Using credit cards instead of traditional contracting methods to purchase in-house items saves administrative costs and decreases turn-around time. Fig. 7.5-39 shows that our credit card purchases have increased since May 1995. We have exceeded our goal to buy 90% of small purchases by credit card.

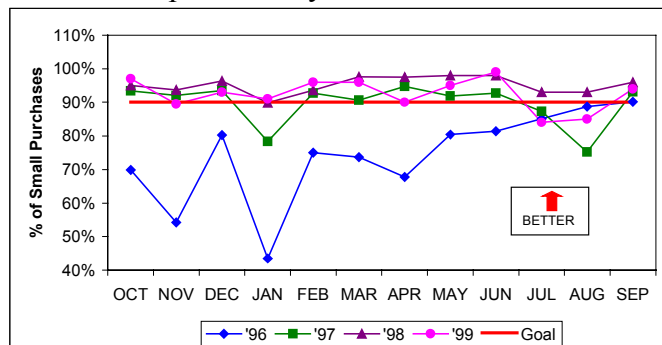


Fig. 7.5-39 Credit Card Purchases

Table 7.5-1 shows that outside awards increased since implementing our team structure. We consider outside awards a measure of innovation and process quality.

Table 7.5-1. Huntsville Center External Awards

| Year | Title  |
|------|--|
| 1995 | <ul style="list-style-type: none"> <li>•ACOE Finalist</li> <li>•Federal Energy and Water Management Award</li> <li>•HQUSACE Extra Special Programs citation for our ASG</li> </ul>   |
| 1996 | <ul style="list-style-type: none"> <li>•ACOE Finalist</li> </ul>   |
| 1997 | <ul style="list-style-type: none"> <li>•ACOE Finalist</li> <li>•Federal Energy and Water Management Award</li> <li>•E. Manning Seltzer Award for service excellence and significant contributions to USACE legal services</li> <li>•Best Small Army Audit Office</li> <li>•Hammer Award—Energy O&amp;M Program</li> <li>•USACE Architect of the Year Award</li> </ul>  |
| 1998 | <ul style="list-style-type: none"> <li>•ACOE Chief of Staff Winner</li> <li>•PQA Achievement Award</li> <li>•DOD Certificate of Recognition for Acquisition Innovation</li> <li>•E. Manning Seltzer Award for service excellence and significant contributions to USACE legal services</li> <li>•Best Small Army Audit Office</li> <li>•ASCE Government Civil Engineer of the Year</li> <li>•Hammer Award—Energy O&amp;M work</li> </ul>   |
| 1999 | <ul style="list-style-type: none"> <li>•Alabama Quality Award for Service Sector</li> <li>•ACOE Chief of Staff Winner</li> <li>•PQA Merit Award</li> <li>•DOD Productivity Excellence Award</li> <li>•Undersecretary of Defense Financial Management Award</li> <li>•Herbert A. Kassner Print Journalism Award, Second Place</li> <li>•E. Manning Seltzer Award for service excellence and significant contributions to USACE legal services</li> <li>•Best Small Army Audit Office</li> <li>•Spirit of Arrowhead Award for Significant Contributions in Corps-wide Legal Management</li> <li>•USACE Engineer of the Year</li> <li>•SAME Engineer of the Year—local chapter</li> </ul> |

Fig. 7.5-40 shows TLM trends for all key processes. We are the only Corps organization that assigns TLM's to Contracting (CT), which helps control in-house costs. The reason for CT's increase is because of changes explained with fig. 7.5-33.

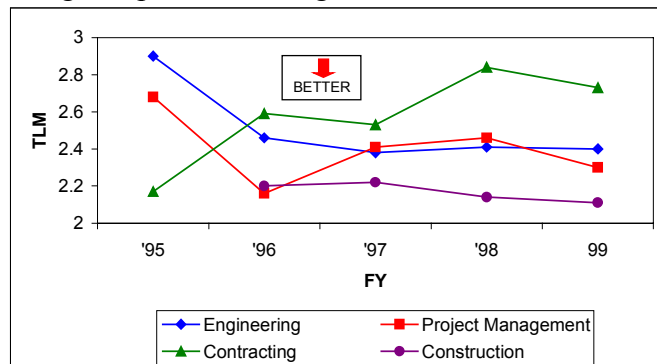


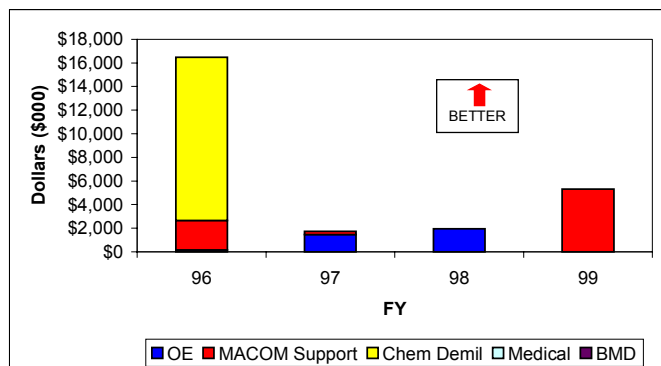
Fig. 7.5-40 TLM By Key Process



Table 7.5-2 and fig. 7.5-41 show cost avoidance through process improvements.

*Table 7.5-2. Cost Avoidance Totals for All Areas*

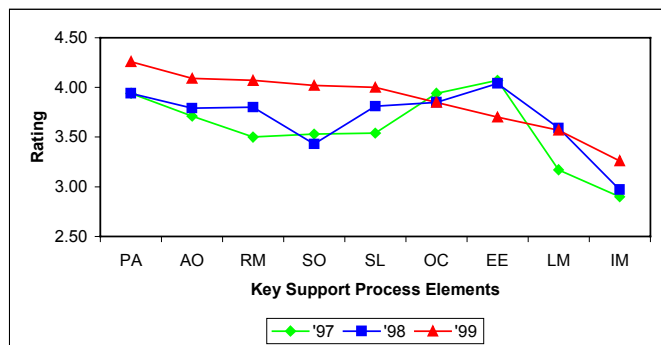
| Year  | Amount Saved (\$M) |
|-------|--------------------|
| 1994  | 34.2               |
| 1995  | 24.3               |
| 1996  | 41.9               |
| 1997  | 24.7               |
| 1998  | 32.1               |
| 1999  | 29.5               |
| Total | 186.7              |



*Fig. 7.5-41. Cost Avoidance for Product Lines*

Figs. 7.5-42 through 7.5-47 and tables 7.5-3 and 7.5-4 show key support process results.

Fig. 7.5-42 shows results from our FY97, FY98, and FY99 internal customer survey key support process element. We use surveys as an overall measure of key support process quality. Results are used to improve internal communication and services.



*Fig. 7.5-42. Key Support Process Breakdown of Internal Customer Survey Trend*

Table 7.5-3 summarizes key support process elements, principal requirements, and key measurement references. Support processes relate to key processes as shown in fig. 6.1-3.

*Table 7.5-3. Key Support Process Summary*

| Key Support Process                     | Process Elements               | Principal Requirement  | Performance References  |
|---|--------------------------------|--|---|
| Regulatory & Legal Compliance           | OC, AO, SO, EEO, RM-M, SL, PAO | Ensure that we play by the rules and protect public safety.        | fig. 7.5-42<br>fig. 7.5-44<br>fig. 7.5-48<br>fig. 7.5-50<br>table 7.2-1<br>table 7.5-4<br>table 7.5-5 |
| Facilities & Equipment Management       | LM Directorate                 | Ensure smooth day-to-day operation of facilities.                  | fig. 7.5-42<br>fig. 7.5-45<br>table 7.2-1<br>table 7.5-4  |
| Communications & Information Management | IM Directorate                 | Ensure smooth day-to-day operation of automated systems.           | fig. 7.5-42<br>fig. 7.5-46<br>fig. 7.5-47<br>table 7.2-1<br>table 7.5-4                               |
| Resource Management                     | RM Directorate                 | Ensure fiscal integrity. Calculate accurate manpower requirements. | fig. 7.5-42<br>fig. 7.5-43<br>table 7.2-1<br>table 7.5-4  |

As table 7.2-1 shows, we carefully control our G&A overhead costs to ensure fair and accurate rates. One important way we ensure that G&A goals are met (fig. 7.2-8) and that our corporate budget estimate is accurate is by operating our key support processes within budget, since they are funded mostly through overhead. Table 7.5-4 shows the support process budget vs. actual performance trend through 3<sup>rd</sup> quarter FY99.

*Table 7.5-4. Key Support Process Elements Budget vs. Actual*

| Support Process | FY96 |     | FY97 |     | FY98 |     | FY99 |     |
|-----------------|------|-----|------|-----|------|-----|------|-----|
|                 | Bud  | Act | Bud  | Act | Bud  | Act | Bud  | Act |
| RM              | 2.9  | 2.8 | 2.7  | 2.9 | 2.8  | 2.9 | 3.0  | 3.1 |
| IM              | 2.5  | 2.8 | 2.3  | 2.3 | 2.2  | 2.1 | 2.1  | 2.1 |
| XO              | .5   | .5  | .8   | .8  | .7   | .7  | .8   | .8  |
| PA              | .3   | .3  | .4   | .3  | .4   | .3  | .4   | .3  |
| OC              | .5   | .5  | .5   | .5  | .6   | .6  | .7   | .7  |
| AO              | .3   | .2  | .3   | .3  | .3   | .3  | .2   | .2  |
| LM              | .7   | .7  | .8   | .7  | .8   | .7  | .7   | .6  |
| SL              | .3   | .3  | .3   | .3  | .3   | .2  | .3   | .3  |

Fig. 7.5-43 shows the timeliness and quality of the RM cost transfer process. The process is 100% on time with a positive accuracy trend.

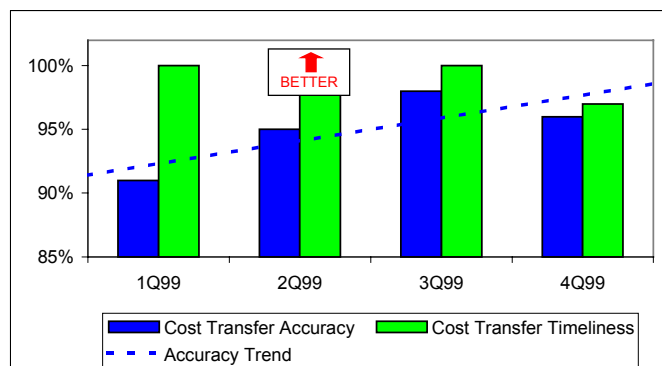


Fig. 7.5-43. RM Process Timelines and Accuracy Rate

Fig. 7.5-44 shows improvement in audit completion rates. To increase that average, AO restructured the scopes of audits and streamlined work processes. As a result, the average audit reports issued from FY94-98 increased to 18 per year. The monetary benefits resulting from audits over the last five years have totaled over \$10 million. Because of AO's efficient work, the office has been recognized for the last three years as the Best Small Audit Office in the Army.

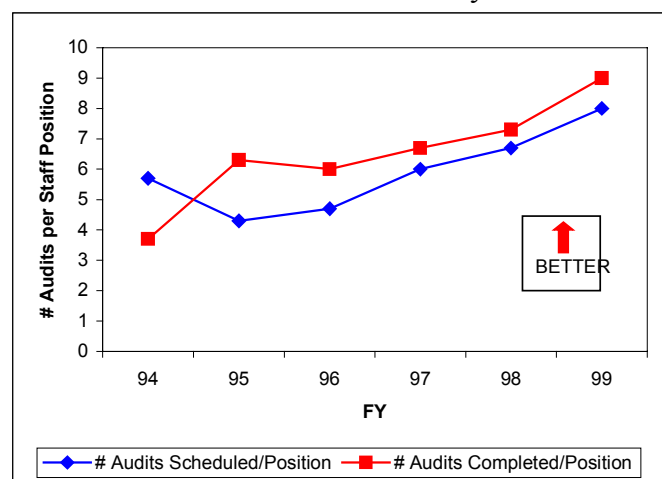


Fig. 7.5-44. Increase in Audits Performed by Audit Office Due to Process Streamlining

Fig. 7.5-45 shows the time it takes to process travel orders and vouchers. The goal is three days. This is a key logistics management measure, since our travel requirements are significant.

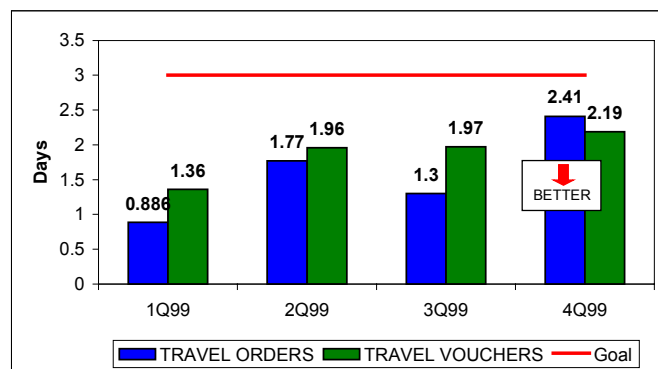


Fig. 7.5-45. Time to Process Travel Orders and Vouchers

Fig. 7.5-46 shows the amount of uptime for network, e-mail, and web services operations. Fig. 7.5-47 shows an improved trend in the average time to complete a help desk request. These are key information management measures.

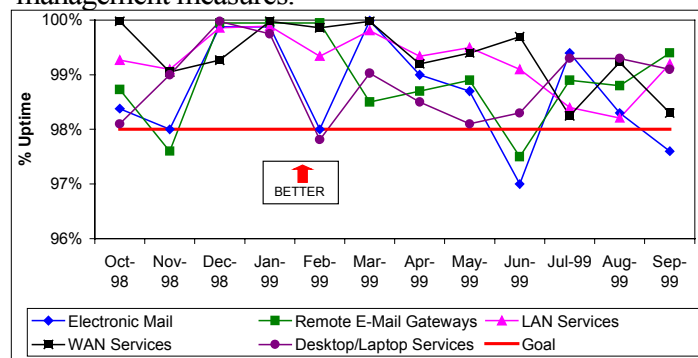


Fig. 7.5-46. % Uptime for Information Management Network, E-Mail, and Web Services

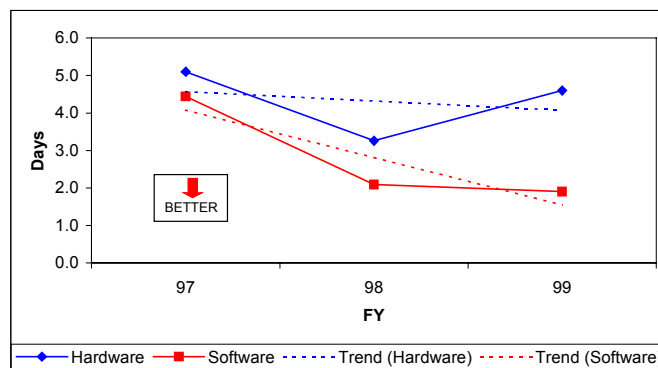


Fig. 7.5-47. Information Management Cycle Time to Complete HelpDesk Request

#### 7.5a(2) Regulatory/legal compliance and citizenship

These are data results from the process outlined in fig. 1.2-1.

Table 7.5-5 shows that since FY94 our Audit Office has made 242 audit recommendations to improve management processes and ensure that we meet regu-



latory and legal requirements. All but three have been closed. Fig. 7.5-32 above is also a measure of regulatory and legal requirements for our construction management process.

Table 7.5-5. Audit Recommendation Resolution

| Recommendation Year | Recommendations | Resolved |
|---------------------|-----------------|----------|
| FY94                | 79              | 79       |
| FY95                | 57              | 57       |
| FY96                | 24              | 24       |
| FY97                | 37              | 37       |
| FY98                | 45              | 45       |
| FY99                | 25              | 22       |

Fig. 7.5-48 shows the ability of our Office of Counsel to review a contract action within three working days. This process is key to our fulfilling our guiding principle “Play By the Rules” (fig. 1.1-2).

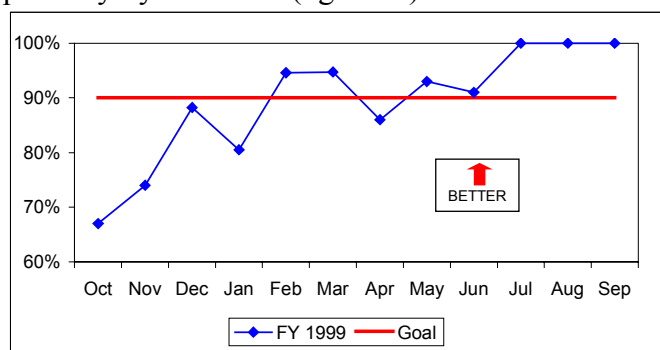


Fig. 7.5-48. Contract Action Review

Fig. 7.5-49 shows an upward trend in media contacts, a measure of keeping the public informed, which is especially critical to our OE and Chem Demil Programs.

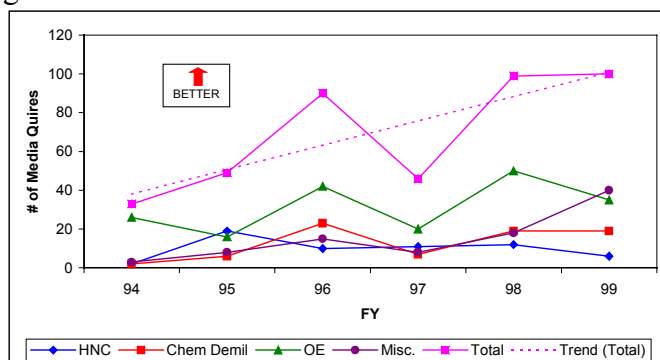


Fig. 7.5-49. Media Contacts

Fig. 7.5-50 shows the material weakness reported in our annual assurance statement through our management control process (MCP). We use this to ensure that we are complying with laws and regulations.

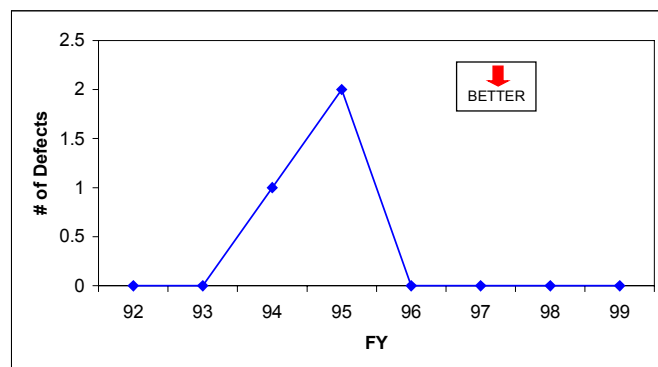


Fig. 7.5-50. Material Weaknesses

Fig. 7.5-51 shows our trend for contributions to the Combined Federal Campaign. We have met our goals every year except one. Our per capita for each employee has grown from \$62 in FY90 to \$121 in FY99.

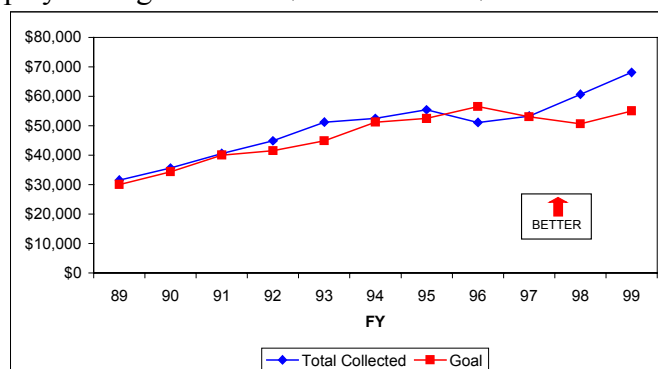


Fig. 7.5-51. Combined Federal Campaign Trend

Table 1.2-1 lists all of our other community involvement activity results.

Table 7.2-1 is the corporate aggregate of the implementation and effectiveness of our organizational strategy. Table 4.1-1 “Key Success Factors” correlates the breakdown of our organizational strategy implementation and effectiveness with the HNC dashboard. Table 2.2-3 correlates projections for product line strategic performance. Table 3.1-3 shows increased work resulting from improved product and service features.



# ***Glossary***



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|               |   |
|---------------|---|
| ACASS .....   | A-E Contract Administration Support System          |
| ACOE .....    | Army Communities of Excellence                      |
| ACPERS .....  | Army Civilian Personnel System                      |
| A-E .....     | Architect-Engineer                                  |
| AEC .....     | Army Environmental Center                           |
| AFB .....     | Award Fee Board                                     |
| AFCS .....    | Army Facility Component System                      |
| AIEP .....    | Army Ideas for Excellence Program                   |
| AMC .....     | Army Materiel Command                               |
| AMCOM .....   | Aviation and Missile Command                        |
| AO .....      | Audit Office  |
| APAP .....    | Army Pollution Abatement Program                    |
| APIC .....    | Army Performance Improvement Criteria               |
| AR .....      | Army Regulation                                     |
| ARNG .....    | Army National Guard                                 |
| ASCE .....    | American Society of Civil Engineers                 |
| ASG .....     | Administrative Support Group                        |
| ASTM .....    | American Society for Testing and Materials          |
| BMDO .....    | Ballistic Missile Defense Office                    |
| BMD .....     | Ballistic Missile Defense                           |
| BRAC .....    | Base Realignment and Closure                        |
| CADD .....    | Computer-Aided Drafting and Design                  |
| CBD .....     | Commerce Business Daily                             |
| CBR .....     | Command Business Review                             |
| CCASS .....   | Construction Contract Administration Support System |
| CD .....      | Directorate of Chemical Demilitarization Program    |
| CDUP .....    | Criteria Document Update Program                    |
| CE .....      | Corps of Engineers                                  |
| CEFMS .....   | Corps of Engineers Financial Management System      |
| CEHNC .....   | Corps of Engineers, Huntsville Center               |
| CEMP .....    | Corps of Engineers Military Programs                |
| CENAE .....   | Corps of Engineers New England Division             |
| CENTCOM ..... | Central Command                                     |
| CMR .....     | Command Management Review                           |
| CPAC .....    | Civilian Personnel Advisory Center                  |
| CPOC .....    | Civilian Personnel Operations Center                |
| CPW .....     | Center for Public Works                             |
| CRB .....     | Contract Review Board                               |
| CRREL .....   | Cold Regions Research & Engineering Laboratory      |
| CSA .....     | Chief of Staff, Army                                |
| CSI .....     | Customer Satisfaction Index                         |

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|---------------|---|
| CT.....       | Directorate of Contracting                          |
| DA.....       | Department of the Army                              |
| DAMO.....     | Deputy Chief of Staff of Operations                 |
| DAWIA.....    | Defense Acquisition Workforce Improvement Act       |
| DC.....       | Deputy Commander                                    |
| DCI.....      | Design Cost Index                                   |
| DFAS.....     | Defense Finance Accounting Service                  |
| DESC.....     | Defense Energy Supply Command                       |
| DLA.....      | Defense Logistics Agency                            |
| DO.....       | Delivery Order                                      |
| DOD.....      | Department of Defense                               |
| DOE.....      | Department of Energy                                |
| DOG.....      | Deployable Operations Group                         |
| DOH.....      | Department Overhead                                 |
| DQCP.....     | Design Quality Control Plan                         |
| DRMS.....     | Defense Reutilization and Marketing Services        |
| ED.....       | Directorate of Engineering                          |
| EDC.....      | Engineering During Construction                     |
| EE/CA.....    | Engineering Evaluations/Cost Assessments            |
| EEO.....      | Equal Employment Opportunity                        |
| EOD.....      | Explosive Ordnance Disposal                         |
| ERG.....      | Executive Review Group (for Chem Demil)             |
| ESPC.....     | Energy Savings Performance Contracting              |
| FORSCOM.....  | Forces Command                                      |
| FTE.....      | Full Time Equivalent                                |
| FY.....       | Fiscal Year   |
| G&A.....      | General and Administrative                          |
| GIS.....      | Geographical Information Systems                    |
| GPS.....      | Global Positioning System                           |
| HAZWOPER..... | Hazardous Waste Operations                          |
| HNC.....      | Huntsville Center                                   |
| HQ.....       | Headquarters  |
| HQDA.....     | Headquarters, Department of Army                    |
| HQUSACE.....  | Headquarters, United States Army Corps of Engineers |
| ID/IQ.....    | Indefinite Delivery/Indefinite Quantity             |
| IDP.....      | Individual Development Plan                         |
| IFB.....      | Information For Bid                                 |
| IM.....       | Directorate of Information Management               |
| IMC.....      | Information Management Committee                    |
| INSCOM.....   | U.S. Army Intelligence Command                      |
| IOC.....      | Industrial Operations Command                       |

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|--------------|--|
| IPR.....     | In-Progress Review                                 |
| IPT .....    | Integrated Process Team                            |
| ISO .....    | International Standards Organization               |
| JPG.....     | Jefferson Proving Grounds                          |
| KSF.....     | Key Success Factors                                |
| LDP .....    | Leadership Development Program                     |
| LIR.....     | Line Item Review                                   |
| LM.....      | Directorate of Logistics Management                |
| LRD .....    | Great Lakes and Ohio River Division                |
| LRL .....    | Louisville District                                |
| MACOM .....  | Major Commands                                     |
| MCA.....     | Military Construction, Army                        |
| MCG.....     | Management Coordination Group                      |
| MCP .....    | Management Control Process                         |
| MEDCOM ..... | Medical Command                                    |
| MILCON ..... | Military Construction                              |
| MIPR.....    | Military Interdepartmental Purchase Request        |
| MOA.....     | Memorandum of Agreement                            |
| MRD.....     | Missouri River Division                            |
| MR&R.....    | Maintenance, Repair & Renewal                      |
| MSC .....    | Major Support Command                              |
| MVD.....     | Mississippi Valley Division                        |
| NAB .....    | Baltimore District                                 |
| NAD .....    | North Atlantic Division                            |
| NASA .....   | National Aeronautics & Space Administration        |
| NAVFAC ..... | Naval Facilities Engineering Command               |
| NFPA.....    | National Fire Protection Agency                    |
| NGB .....    | National Guard Bureau                              |
| NMD.....     | National Missile Defense                           |
| NWD .....    | Northwestern Division                              |
| NWO .....    | Omaha District                                     |
| OC .....     | Office of Counsel                                  |
| OE.....      | Ordnance and Explosives                            |
| OLE .....    | Organizational Leadership for Executives           |
| OMEE.....    | Operation and Maintenance Engineering Enhancements |
| OSD.....     | Office of the Secretary of Defense                 |
| P&PM.....    | Program & Project Management                       |
| PA.....      | Programmed Amount                                  |
| PALT .....   | Procurement Administrative Lead Time               |
| PAO.....     | Public Affairs Office                              |
| PAT .....    | Process Action Team                                |

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|               |  |
|---------------|--|
| PAX.....      | Programming, Administration, and Execution                   |
| PBC .....     | Performance-Based Contracting                                |
| PMBP .....    | Project Management Business Process                          |
| PBS.....      | Production Base Support                                      |
| PIP .....     | Public Involvement Plan                                      |
| PM .....      | Project Manager / Project Management                         |
| PMCD .....    | Program Manager for Chemical Demilitarization                |
| PME.....      | Personnel Management for Executives                          |
| PMP .....     | Project Management Plan                                      |
| PQA.....      | President's Quality Award                                    |
| PQCP.....     | Program Quality Control Plan                                 |
| POC .....     | Point of Contact   |
| POD.....      | Pacific Ocean Division                                       |
| POM .....     | Project Objective Memorandum                                 |
| PR&A .....    | Program Review and Analysis                                  |
| PRAC .....    | Program Resource Advisory Council                            |
| PRB .....     | Project Review Board   |
| PRT .....     | Project Review Team (for Chem Demil)                         |
| PROMIS .....  | Project Management Information System                        |
| QA .....      | Quality Assurance  |
| QA/QC .....   | Quality Assurance/Quality Control                            |
| QC .....      | Quality Coordinator  |
| QCP .....     | Quality Control Plan   |
| QSG.....      | Quality Steering Group                                       |
| RAB.....      | Restoration Advisory Board                                   |
| RCRA .....    | Resource Conservation & Recovery Act                         |
| RFI.....      | Request for Information                                      |
| RFP.....      | Request for Proposal   |
| RM.....       | Directorate of Resource Management                           |
| RTLP .....    | Range and Training Land Program                              |
| S&A.....      | Supervisory & Administrative                                 |
| SAACONS ..... | Standard Army Automated Contracting System                   |
| SAD.....      | South Atlantic Division                                      |
| SAM .....     | Mobile District  |
| SAME.....     | Society of American Military Engineers                       |
| SARDA .....   | Secretary of the Army, Research, Development and Acquisition |
| SDC .....     | Strategic Defense Command                                    |
| SL .....      | Office of Security and Law Enforcement                       |
| SMDC .....    | Space & Missile Defense Command                              |
| SO.....       | Safety Office  |
| SOP .....     | Standing Operating Procedure                                 |

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|----------------|---|
| SOUTHCOM ..... | Southern Command  |
| SOW .....      | Statement of Work   |
| SPD .....      | South Pacific Division                                    |
| SPK .....      | Sacramento District                                       |
| SSCASS .....   | Service and Supplies Contractors Appraisal Support System |
| SWD .....      | Southwestern Division                                     |
| SWF .....      | Fort Worth District                                       |
| SWOT .....     | Strength, Weaknesses, Obstacles, and Threats              |
| TAC .....      | Transatlantic Programs Center-Europe                      |
| TEB .....      | Technical Evaluation Board                                |
| TAPES .....    | Total Army Personnel Evaluation System                    |
| TLM .....      | Total Labor Multiplier                                    |
| TRACES .....   | Tri-Services Automated Cost Engineering System            |
| TRADOC .....   | Training and Doctrine Command                             |
| UPH .....      | Unaccompanied Personnel Housing                           |
| USACE .....    | United States Army Corps of Engineers                     |
| USARC .....    | United States Army Reserve Command                        |
| USAEUR .....   | United States Army, European Command                      |
| USMC .....     | United States Marine Corps                                |
| USATCES .....  | United States Army Technical Center for Explosive Safety  |
| UXO .....      | Unexploded Ordnance                                       |
| VE .....       | Value Engineering   |
| VTC .....      | Video-Teleconferencing Center                             |